CATALOG PR120-6909

PROTO PROFESSIONAL TOOLS

PENDLETON TOOL PTii INDUSTRIES, INC.

PROTO TOOL COMPANY

DIVISION OF PENDLETON TOOL INDUSTRIES, INC.

HAND TOOLS FOR ALL INDUSTRIES

IN STOCK AT:

PROTO TOOL COMPANY
DIVISION OF PENDLETON TOOL INDUSTRIES, INC.

SKILLED TOOL USERS in every industry throughout the world prefer PROTO fine quality hand tools for professional work. In this catalog are over 3,000 different tool models and sizes, making it possible to select the right tool for every job in every field . . . motors, machinery, transportation, communication, construction, marine, governmental activities, manufacturing, maintenance, plumbing, hobbies, farm and home use.

PROFESSIONAL QUALITY Proto tools are designed and manufactured to exceed rigid requirements of industries and professional tool users.

JOB-TESTED designs assue proper strength, lightness, balance and ease of handling.

DURABILITY of PROTO tools is due to the use of special alloy steels (PROTOLOY, Reg. U.S. Pat. Off.), skillful forging and scientific heat treatment.

MODERN MANUFACTURING METHODS produce more accurately fitting tools for fast, safe use. The durability and efficiency of PROTO tools make them more ECONOMICAL in the long run than ordinary tools . . . BETTER BUYS.

GUARANTEE

PROTO tools are guaranteed to perform the work for which they are designed, and to last as long as is consistent with ordinary wear. Any tools found defective in workmanship or material and returned to the factory with transportation charges prepaid, will be replaced, repaired or credited at current prices (as deemed best by us) provided it has been used for the purpose for which the tool was designed. Our liability under our guarantee is limited to the foregoing and special tools not included in our current catalog and price list are not covered by this guarantee. Tools that have been ground or altered in any manner from their original design are not covered by this guarantee.

WHERE TO BUY PROTO TOOLS. Leading automotive, industrial, hardware, implement, plumbing and tool dealers and distributors throughout North America and abroad sell PROTO tools.

SPECIAL TOOLS of many types are designed and produced to order for manufacturers and others for special purposes not covered by standard tools listed in this catalog.

For information on any special tool problem see your PROTO distributor.

PRICES, designs, finishes, steel analyses and other specifications are subject to change without notice.

IMPORTANT SAFETY RULES

Hand tools, although commonly used, are specialized for particular jobs. Always use the right size and type of tool for the job being done. Keep tools in proper working condition.

"Mushroomed" heads of chisels and punches may chip and cause injury.

Screwdriver blades are made to turn screws; they should never be used for other purposes. Worn blades may slip and cause injury.

Only power drive sockets should be used on pneumatic or electric impact wrenches.

All wrenches are designed to a specific size-length-strength ratio. The use of a "cheater" or any other means for increased leverage is hazardous.

Keep hammer heads tightened on handle. Do not strike one hammer with another hammer.

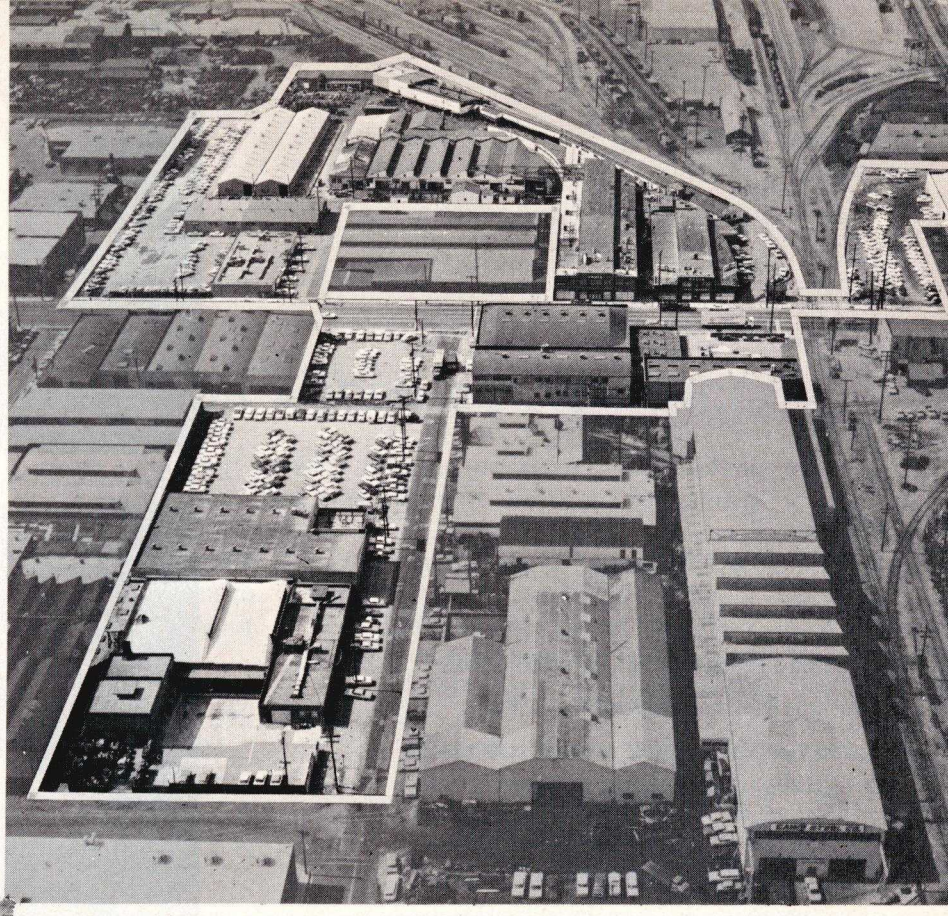
Eye protection, through use of safety glasses or hood, is recommended for any job involving the use of tools; particularly when using punches, chisels and drills.

Use hand tools only for their designed purposes and within their size range.

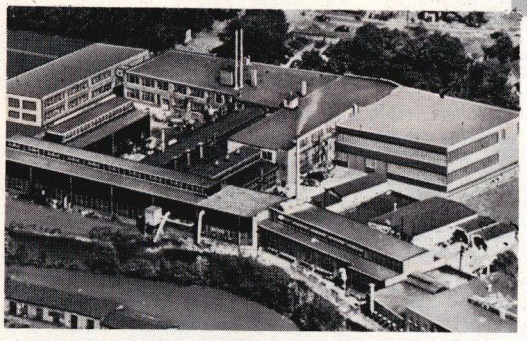
Proto Tool Company cannot be responsible for injury or damage caused by tools improperly used; or from tools which have been abused or badly worn.

PROTO®

NATION-WIDE MANUFACTURING FACILITIES

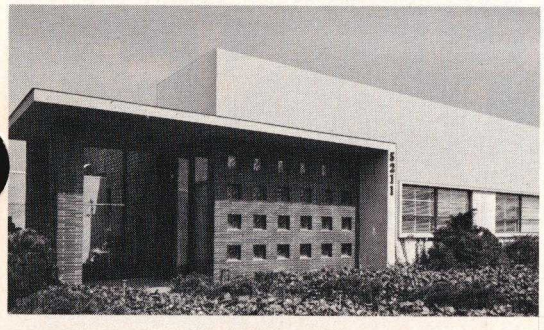


Los Angeles, California, Factory and Main Offices



Jamestown, N.Y., Factory

London, Ontario, Factory (PROTO TOOLS OF CANADA, Ltd)



Pico Rivera, California (Contract Division)

Since the firm was established in 1907 the demand for professional quality PROTO tools has increased until PROTO has become a world leader in its field. This professional quality and continually growing popularity of PROTO tools is due in large measure to the skillful workmanship and teamwork of PROTO employees, salesmen, alert distributors and dealers throughout North America and abroad.

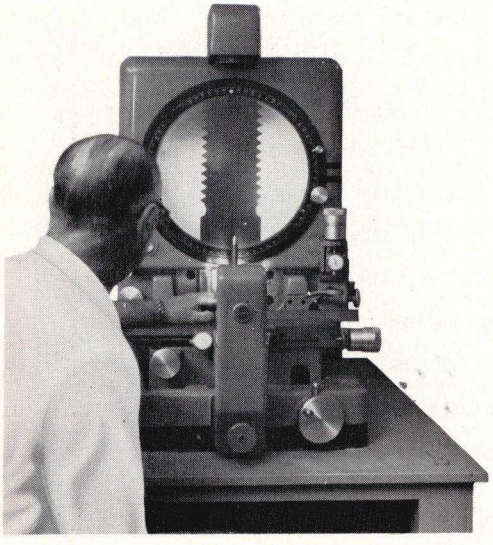
PROTO® TOOLS
PROFESSIONAL QUALITY TOOLS

PROTO TOOL COMPANY
DIVISION OF PENDLETON TOOL INDUSTRIES, INC.

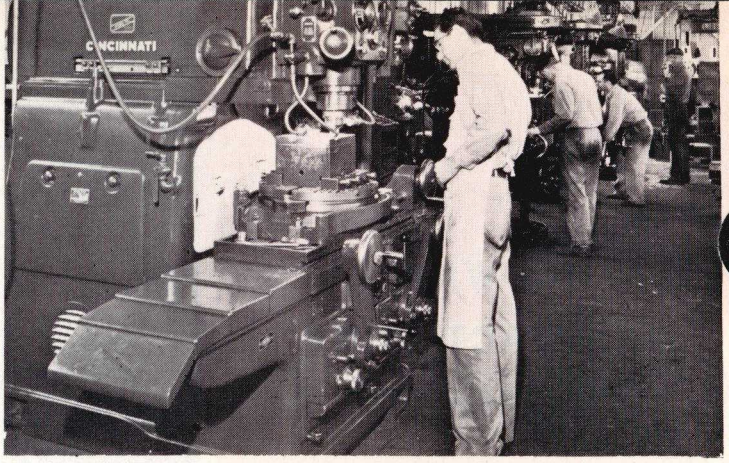
PROTO TOOLS
PROFESSIONAL QUALITY TOOLS

MODERN MANUFACTURING METHODS

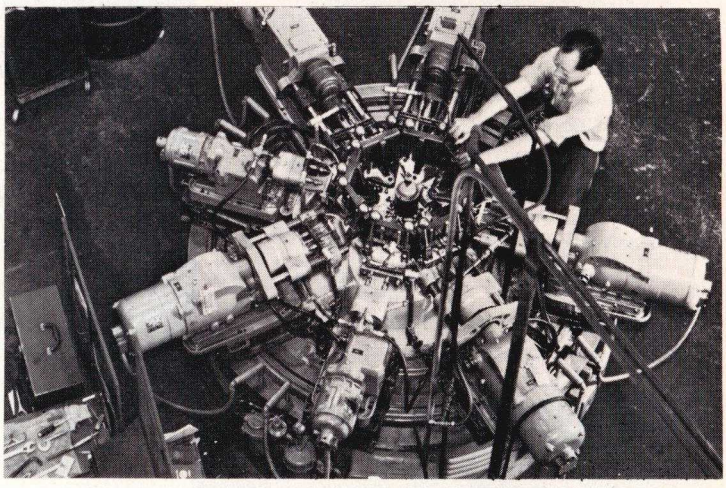
More than a half-century ago when PROTO tools were made in a small blacksmith shop, their professional quality was due to skilled workmanship. This continues to be the reason for PROTO'S leadership in the industry. In operations where machines can save time and money, and improve quality, PROTO uses the most efficient precision automatic machinery.



This contour projector is typical of the quality control equipment used by PROTO.

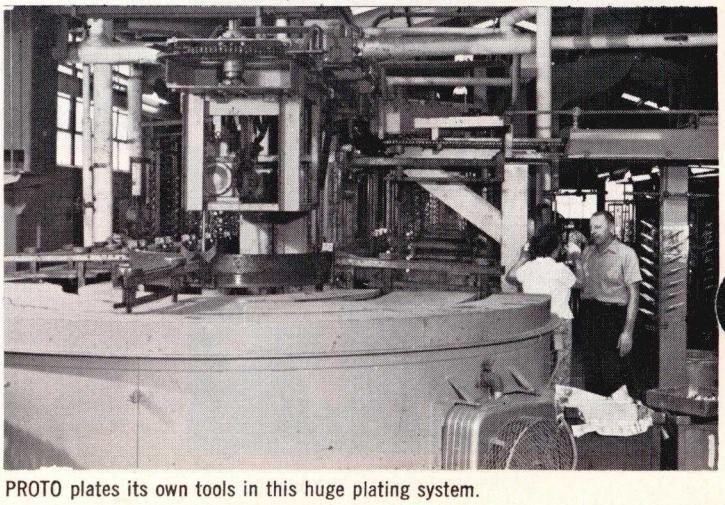


Modern milling machines in PROTO die sinking department.



Automated, precision machines keep quality up and cost down.

Section of automatic screw machine department at main plant.



PROTO plates its own tools in this huge plating system.

FOR YOUR ADDED CONVENIENCE

In order to make it easier to find the product you are looking for, Proto has provided two different means of references:

1. When you have the Proto product number use the Numerical-Alphabetical Index to locate the exact page on which your product is described.

   NUMERICAL-ALPHABETICAL INDEX. The numerical section starts with "000A," followed by "00". series, then "0" series through "33641." The alphabetical section follows the numerical section, starting with "ATG - 15" through "WT - 9T".

2. When you do not have the Proto product number use the Description Index which will identify the right tool section.

   DESCRIPTION INDEX. This index is entirely alphabetical, lists tools by major categories. Starts with "Adapters" and concludes with "Wrenches."

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000A	3	010/12	3	023/25	3	07513SL	70	**07524L**	**69**	09904	77	09941	77
000AA	3	011	3	024/26	3	07513SS	70	07524M	98	09914	77	09942	77
000BB	3	011L	3	025	3	07514	69	07526M	98	09915	77	09944	77
000C	3	011/13	3	025L	3	07514L	69	07527M	98	09916	77	09945	77
000D	3	012	3	025/27	3	07514S	69	07528M	98	09917	77	09947	77
000E	3	012L	3	026L	3	07515	69	07530M	98	09918	77	09948	77
000K	**3**	012/14	3	027L	3	07515L	69	07532M	98	09918SS	77	09950	77
000L	**3**	013	3	028L	3	07515S	69	07533M	98	09919	77	09952	77
000M	3	013L	3	030	3	07516	69	07534M	98	09920	77	2	6
000N	3	013/15	3	030L	3	07516L	69	07536M	98	09920SS	77	3	6
000P	3	014	3	032	3	07516S	69	07538M	98	09921	77	4"J	114
000R	3	014L	3	032L	3	07517	69	07541M	98	09921SS	77	4"JP	114
002	3	014/16	3	033½In	4	07517L	69	07542M	98	09922	77	4"KK	114
002L	3	015	3	033½ Out	4	07517M	98	07543M	98	09923	77	5 7/16	4
003	3	015L	3	033⅝ In	4	07517S	69	07546M	98	09924	77	5½	4
003L	3	015/17	3	033⅝ Out	4	07518	69	07550M	98	09924SS	77	5 ⅝	4
004	3	016	3	035	3	07518L	69	07567	69	09925	77	5¾	4
004L	3	016L	3	035L	3	07518S	69	07568	69	09926	77	6"J	114
004/6	3	016/18	3	040	3	07519	69	07569	69	09926S	77	6"JP	114
005	3	017	3	040L	3	07519L	69	07570	69	09927	77	6"KK	114
005L	3	017L	3	07500P	69	07519M	**98**	07655	69	09928	77	6½ x12	4
005/7	3	017/19	3	07500R	69	07519S	69	07656	69	09929	77	6⅝x12½	4
006	3	018	3	07509	69	07520	69	07708S	69	09929S	77	6⅝x18	4
006L	3	018L	3	07509L	69	07520L	69	07709S	69	09930	77	8"J	114
006/8	3	018/20	3	07510	69	07520S	69	07710S	69	09930S	77	8"JP	114
007	3	019	3	07510L	69	07521	69	07711S	69	09931	77	8"KK	114
007/9	3	019L	3	07510SS	69	07521L	69	07713S	69	09932	77	10"J	114
008	3	019/21	3	07511	69	07521M	98	07714S	69	09932S	77	10"JP	114
008L	3	020	3	07511L	69	07521S	69	07715S	69	09933	77	10"KK	114
008/10	3	020L	3	07511SS	69	07522	69	07716S	69	09934	77	11 3/16	4
009	3	020/22	3	07512	69	07522L	69	07717S	69	09935	77	11¼	4
009/11	3	021L	3	07512L	69	**07522M**	98	07718S	69	09936	77	11 5/16	4
0015	3	021/23	3	07512S	69	07523	69	07719S	69	09937	77	11⅜	4
0015L	3	022	3	07513	69	07523L	69	07720S	69	09938	77	11 7/16	4
010	3	022L	3	07513L	69	07523M	98	07721S	69	09939	77	11½	4
010L	3	022/24	3	07513S	69	07524	69	09902	77	09940	77	12"J	114

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12"JP	114	72 5/16	5	140J	5	235BN	112	303R	16	426	17	716	18
12"KK	114	72 3/8	5	140S	5	238	9	303S	16	426S	17	716C	113
12 5/8	4	72 1/2	5	141	5	239	10	306	16	428	17	716J	113
12 3/4	4	72 5/8	5	141J	5	240	10	307	16	428S	17	716JP	113
12 7/8	4	76 1/4	5	141S	5	240BN	112	310	16	440-01	–	716KC	113
12-1	4	76 5/16	5	142	5	241	10	312	16	440-02	–	716KLC	113
12-1 1/8	4	76 3/8	5	142J	5	241BN	112	317	16	441-07	–	716L	17
13 1/4	4	76 1/2	5	142S	5	242	10	320	16	441-09	–	716NC	113
13 5/16	4	76 5/8	5	200L	7	242G	10	322	16	450	12	716RC	113
13 3/8	4	80 1/4	5	200M	7	243	10	330	16	451	12	716S	18
13 1/2	4	80 5/16	5	200S	7	243G	10	332	16	452	12	716SL	17
13 5/8	4	80 3/8	5	201	7	243BN	112	345	16	453	12	718	18
13 3/4	4	80 5/8	5	202	7	244	10	349	47	454	12	718C	113
13 7/8	4	84 1/4	4	202BN	112	244BN	112	350	47	455	12	718J	113
13-1	4	84 7/8	4	203	7	245	10	350C	47	456	12	718JP	113
14 1/2 x12 1/2	4	84-1	4	204	7	245BN	112	351	47	457	12	718KC	113
14 5/8 x13	4	86A 3/16	5	204G	7	246	10	351V	47	458	12	718KLC	113
14 5/8 x19	4	86A 1/4	5	204SG	7	248P	10	351Y	47	459	12	718L	17
14 3/4 x15	4	86A 5/16	5	204SGT	7	248SBN	112	352	16	460	12	718NC	113
15 5/8	5	86A 3/8	5	205	7	250	10	353	16	461	12	718RC	113
19	4	86A 7/16	5	205G	7	250-S	112	385	15	470	12	718S	18
21 1/2In	4	86A 1/2	5	205SG	7	251	10	388	15	471	12	718SL	17
21 1/2Out	4	86A 5/8	5	206	7	251-S	112	389	15	472	12	720	18
33 1/2In	4	86A 3/4 x8	5	206G	7	252	10	390	15	473	12	720C	113
33 1/2 Out	4	86A 3/4 x12	5	206T	7	253	11	391	15	475	12	720J	113
33 5/8 In	4	86A 7/8 x8	5	207	7	253J	11	392	15	476	12	720JP	113
33 5/8 Out	4	86A 7/8 x12	5	207G	7	257	11	393	15	477	12	720KC	113
34 1/4	80	86A-1x8	5	209	7	257BN	112	394	15	478	12	720KLC	113
34 3/8	80	96 1/4	5	209G	7	260	11	395	15	480	12	720L	17
35 1/4	80	96 5/16	5	211S	8	266	11	397	15	481	12	720NC	113
36 1/4	80	96 3/8	5	212G	8	266G	11	398	15	704	18	720RC	113
36 5/16	80	96 7/16	5	215	8	267	11	399	15	704L	17	720S	18
36 3/8	80	96 1/2	5	216	8	268	11	402	17	704S	18	720SL	17
37 1/2	4	96 5/8	5	217	8	268G	11	402B	112	704SL	17	801	18
37 5/8	4	96 3/4	5	218	8	269	11	402P	112	706	18	801C	113
37 3/4	4	100	80	218G	8	272	11	402S	17	706L	17	801R	113
41 1/4	5	100HR	109	220	8	272G	11	402SB	112	706S	18	806	18
41 5/16	5	102A	112	220G	8	275	11	403	17	706SL	17	806A	113
41 3/8	5	102GS	17	221	8	276	11	403B	112	708	18	806B	113
41 7/16	5	103A	112	221A	8	278	11	403S	17	708L	17	806C	113
41 1/2	5	103GS	17	221S	8	280	11	403SB	112	708S	18	806D	113
41 5/8	5	103P	112	222	8	280BN	112	404	17	708SL	17	806E	113
44 1/4	5	104A	112	222G	8	282B	14	404B	112	710	18	806G	113
44 5/16	5	104GS	17	223	9	282BSG	14	404CB	112	710L	17	806H	113
44 3/8	5	106GS	17	224	9	282G	14	404CP	112	710S	18	806HD	18
47A	6	108GS	17	225	9	283G	14	404P	112	710SL	17	806J	113
47 1/4 x 1/16	5	109	4	225G	9	284BSG	14	404S	17	712	18	806K	113
47 1/4 x 3/32	5	110	5	226	9	285B	14	404SB	112	712L	17	806P	113
47 5/16 x 1/8	5	110GS	17	226G	9	285BSG	14	406	17	712S	18	806PF	113
47 5/16 x 5/32	5	112	4	227	9	285G	14	406B	112	712SL	17	806SF	113
47 3/8 x 3/16	5	112GS	17	227G	9	285S-S	112	406CB	112	715	18	808	18
47 7/16 x 7/32	5	130	5	228	9	286G	14	406S	17	715C	113	808A	113
47 1/2x1/4	5	131 5/8	5	229-01	–	287B	14	406SB	112	715J	113	808B	113
50 3/16	5	131 3/4	5	229-03	–	287BSG	14	408	17	715JP	113	808C	113
50 1/4	5	132L	5	230	9	287G	14	408S	17	715KC	113	808D	113
50 5/16	5	132R	5	231	9	291	11	410	17	715KLC	113	808E	113
50 3/8	5	136	4	231-50	112	291R	11	410B	112	715L	17	808G	113
50 7/16	5	137	4	234	9	292R	11	410S	17	715NC	113	808H	113
50 1/2	5	140	4	234BN	112	299	14	410SB	112	715RC	113	808HD	18
72 1/4	5	140A	5	235	9	303L	16	412	17	715S	18		
								412B	112	715SL	17		
								412S	17				
								412SB	112				
								424	17				
								424S	17				

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808J	113	824D	113	1135M	88	1216	20	1324P	30	1551-S	33	1611-34	99
808K	113	824E	113	1137	19	1216BS	22	1324PH	30	1552	33	1611-41	100
808P	113	824FHD	18	1139	19	1216L	20	1332	30	1552-B	33	1611-42	100
808PF	113	824G	113	1140	19	1216M	89	1332P	30	1552-S	33	1611-43	100
808SF	113	824H	113	1141	19	1217M	89	1332PH	30	1555	33	1611-44	100
810	18	824HD	18	1145	19	1218	20	1340P	30	1555-B	33	1611-45	100
810A	113	824J	113	1147	19	1218L	20	1340PH	30	1555-S	33	1611-46	100
810B	113	824K	113	1150	19	1218M	89	1360	30	1556	33	1611-48	100
810C	113	824P	113	1151	19	1219M	89	1360M	30	1556-B	33	1611-49	100
810D	113	824PF	113	1155	19	1220	20	1360T	30	1556-S	33	1611-61	100
810E	113	824SB	113	1160	19	1220L	20	1362	30	1557	33	1611-62	100
810G	113	824SF	113	1161	19	1220M	89	1364	30	1557-B	33	1611-63	100
810H	113	824-60	113	1162	19	1221M	89	1364M	30	1557-S	33	1611-64	100
810HD	18	824-64	113	1163	19	1222	20	1364T	30	1560	33	1611-65	100
810J	113	836A	113	1164	19	1222L	20	1368	30	1560-B	33	1611-66	100
810K	113	836B	113	1191	20	1222M	89	1368H	30	1565	33	1611-67	100
810P	113	836C	113	1192	20	1223M	89	1370C	30	1565-B	33	1611-68	100
810PF	113	836D	113	1193	20	1224	20	1370H	30	1565-S	33	1611-69	100
810SB	113	836E	113	1194	20	1224L	20	1383	30	1566	33	1611-70	100
810SF	113	836HD	18	1195	20	1224M	89	1384	30	1566-B	33	1611-71	100
814	18	848A	113	1196	20	1225M	89	1384M	30	1569	33	1611-72	100
814A	113	848B	113	1200E	21	1226	20	1384T	30	1569-B	33	1611-73	100
814B	113	848C	113	1200F	21	1226M	89	1400SP	32	1569-S	33	1611-74	99
814C	113	848D	113	1200H	21	1227M	89	1411	31	1570	33	1611-75	99
814D	113	848E	113	1200L	21	1228	20	1412	31	1570-B	33	1720	48
814E	113	848HD	18	1200M	89	1228M	89	1413	31	1570-S	33	1721	48
814FHD	18	1100K	19	1200-80	21	1229M	89	1416H	30	1571	33	1725	22
814G	113	1100M	19	1200P-M	89	1230	20	1419	31	1571-B	33	1730	22
814H	113	1100P-M	88	1204E	21	1230M	89	1419H	30	1571-S	33	1731	22
814HD	18	1100R-M	88	1205E	21	1232	20	1421	31	1575	33	2003	43
814J	113	1120	19	1206BS	22	1232M	89	1421GH	30	1575-S	34	2005	43
814K	113	1120L	19	1206E	21	1234	20	1424	31	1576	33	2005S	43
814P	113	1120M	88	1206M	89	1236	20	1424H	30	1576-S	34	2006	43
814PF	113	1121M	88	1207M	89	1236M	89	1425	31	1580	33	2007	43
814SB	113	1122	19	1208	20	1240	20	1426	31	1580-S	34	2009	43
814SF	113	1122L	19	1208BS	22	1241M	89	1426H	30	1581	33	2010	43
814-60	113	1122M	88	1208E	21	1242	20	1427	31	1581-S	34	2011	43
814-64	113	1123M	88	1208L	20	1244	20	1428	31	1585	34	2012	43
818	18	1124M	88	1208M	89	1246	20	1429	31	1585-B	34	2013	43
818A	113	1125	19	1209E	21	1246M	89	1429H	30	1586	34	2014	43
818B	113	1125L	19	1209M	89	1248	20	1430	30	1586-B	34	2015	43
818C	113	1125M	88	1210	20	1250M	89	1430H	30	1601-10	99	2116	32
818D	113	1126	19	1210BS	22	1252	20	1431	30	1602-10	99	2120	32
818E	113	1126L	19	1210E	21	1254	20	1448	30	1611-11	100	2124	32
818FHD	18	1126M	88	1210L	20	1256	20	1448B	30	1611-12	100	2125	32
818G	113	1127	19	1210M	89	1258	20	1452	31	1611-13	100	2126	32
818H	113	1127M	88	1211	20	1260	20	1453	31	1611-14	100	2130	32
818HD	18	1128M	88	1211E	21	1264	20	1454	31	1611-21	99	2151	43
818J	113	1129M	88	1211M	89	1304P	30	1455	31	1611-22	99	2152	43
818K	113	1130	19	1212	20	1304PH	30	1457	31	1611-23	99	2301	43
818P	113	1130L	19	1212BS	22	1308	30	1458	31	1611-24	99	2302	48
818PF	113	1130M	88	1212E	21	1308P	30	1501	32	1611-25	99	2302M	48
818SB	113	1131	19	1212L	20	1308PH	30	1502	32	1611-26	99	2303	44
818SF	113	1131L	19	1212M	89	1312	30	1509	32	1611-27	99	2304	44
818-60	113	1131M	88	1213M	89	1312P	30	1550	33	1611-28	99	2305	44
818-64	113	1132M	88	1214	20	1312PH	30	1550-1	34	1611-29	99	2306	44
824	18	1133M	88	1214BS	22	1316	30	1550-B	33	1611-30	99	2307	44
824A	113	1134	19	1214L	20	1316P	30	1550-S	33	1611-31	99	2310	44
824B	113	1134M	88	1214M	89	1316PH	30	1551	33	1611-32	99	2315	44
824C	113	1135	19	1215M	89	1324	30	1551-B	33	1611-33	99		

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2316	44	2618	29	3220	24	4011	37	4055H	39	4700G-M	90	4749W	114
2320	44	2618SW	29	3221	24	4011S	37	4055R	39	4704	49	4750	50
2321	44	2620	29	3225	24	4012	37	4056	38	4704M	90	4750C	114
2322	44	2620SW	29	3226	24	4012T	37	4056A	38	4705	49	4750D	114
2323	44	2621SW	29	3300A	25	4015	37	4056B	38	4705M	90	4750DB	114
2335	44	2623	29	3314	25	4016	37	4056C	36	4706	49	4750DP	114
2335B	44	2623SW	29	3315	25	4017	37	4056H	37	4706M	90	4750DPR	114
2336	44	2624	29	3316	25	4018	37	4056J	36	4707	49	4750G	114
2337	44	2624SW	29	3318	25	4019	37	4056L	38	4707M	90	4750RR	114
2338	44	2626	29	3320	25	4020A	37	4056N	36	4707T	49	4750S	114
2339	44	2626SW	29	3322	25	4020B	37	4056PN	36	4708	49	4750W	114
2344	45	2627	29	3324	25	4020C	37	4056R	37	4708L	49	4751	50
												4753	49
2345	45	2627SW	29	3328	25	4021	36	4056RS	37	4708M	90	4753 RK	114
		2629	29	3332	25	4021S	36	4056S	38	4708S	49	4759	50
		2629SW	29	3336	25	4022	36	4057J	37	4708T	49	4760	50
2350A	32	2630	29	3340	25	4022T	36	4058J	38	4709	49	4761	50
2352	32	2630SW	29	3400G	23	4022TS	36	4060A	36	4709L	49	4763	50
2353	32	2632	29	3425	23	4025	36	4060E	36	4709M	90	4764	50
2355	32	2632SW	29	3426	23	4026	36	4061	36	4709T	49	4765	50
2356	32	2635	29	3430	23	4027	36	4063	36	4710	49	4766	50
2357	32	2635SW	29	3435	23	4028	35	4066	36	4710L	49	4767	50
2359	32	2638	29	3440	23	4029	36	4067	36	4710M	90	4769	50
2360	32	2638SW	29	3700A	25	4030A	37	4070C	36	4710S	49	4770	50
2361	32	2641	29	3712	25	4030B	37	4070E	36	4710T	49	4771	50
2402	111	2641SW	29	3714	25	4032	38	4071	36	4711	49	4771T	50
2403	111	2644	29	3716	25	4032A	38	4080	39	4711L	49	4772	50
2404	111	2644SW	29	3718	25	4032B	38	4080B	39	4711M	90	4772T	50
2404F	111	2647SW	29	3720	25	4032S	38	4080S	39	4711T	49	4773	50
2404M	111	2650SW	29	3724	25	4033	40	4100	40	4712	49	4773T	50
2405	111	3000H	23	3728	25	4033B	40	4100A	40	4712L	49	4774	50
2405M	111	3000N	23	3730	25	4033S	40	4100B	40	4712M	90	4774T	50
2406	111	3016	23	3732	25	4034	40	4100CAL	40	4712S	49	4780	50
2406M	111	3018	23	3734	25	4040	38	4100CAS	40	4712T	49	4785	50
2407	111	3020	23	3736	25	4040-1	38	4100CS	40	4714	49	4795	110
2409	111	3021	23	3751	25	4040-2	38	4100CSN	40	4714L	49	4796	110
2409M	111	3025	23	3752	25	4040-3	38	4100JB	40	4714T	49	4900A	53
2410	111	3026	23	3753	25	4040-4	38	4100JL	40	4716	49	4912	53
2411	111	3027	23	3754	25	4040-5	38	4100JS	40	4716L	49	4914	53
2412	111	3030	23	3755	25	4040-6	38	4100MB	40	4716T	49	4916	53
2413	111	3031	23	3756	25	4040-7	38	4100N	40	4735	49	4918	53
2413M	111	3033	23	3757	25	4040-8	38	4100P	40	4736	49	4920	53
2414	111	3034	23	4000AB	38	4040-9	38	4100PN	40	4737	49	4922	53
2415	111	3035	23	4001	35	4040-10	38	4100S	40	4737L	49	4924	53
2416	111	3037	23	4001B	35	4040-11	38	4100W	40	4738	49	4926	53
2417	111	3039	23	4001C	35	4040-12	38	4100-51	40	4738L	49	4928	53
2418	111	3040	23	4001F	35	4040-13	38	4100-82	40	4741	49	4932	53
2418M	111	3041	23	4001G	35	4040-14	38	4510	39	4742	49	4940	53
2419	111	3045	23	4001J	35	4041	39	4511	39	4743	49	4944	53
2420	111	3050	23	4001JT	35	4042	39	4512	39	4744	49	4975	97
2421	111	3051	23	4001R	35	4043	39	4515	39	4745	49	4976	97
2422	111	3055	23	4001S	35	4043B	39	4516	39	4746	49	4977	45
2423	111	3060	23	4001ST	35	4043S	39	4517	39	4747	50	4978	45
2424	111	3070	23	4001T	35	4043T	39	4532	39	4749	50	4980	53
2425	111	3200B	24	4001W	35	4054	39	4533	39	4749C	114	4981	53
2426	111	3200C	25	4005	35	4054C	39	4534	39	4749DL	114	4982	53
2427	111	3200D	24	4005B	35	4054H	39	4700B	51	4749DR	114	4983	53
2428	111	3210	24	4005C	35	4054R	39	4700C	51	4749H	114	4984	53
2615	29	3211	24	4005S	35	4055	39	4700D	81	4749R	114	4985	53
2617	29	3215	24	4010B	37	4055B	39	4700E	51	4749RK	51	4986	53
2617SW	29	3216	24	4010C	37	4055C	39	4700F-M	90	4749S	114	4987	53

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4988	53	5207MH	91	5244	53	5300A	57	5416	55	5441½B	55	5528	58
4989	53	5208	51	5246	53			5416H	55	5441M	93	5528M	95
4990⅛	53	5208BS	51	5247	54	5300C-M	94	5416M	93	5441 9/16	55	5529M	95
4990 5/32	53	5208M	91	5249	53	5300D-M	94	5416S	55	5441 9/16 B	55	5530	58
4990 3/16	53	5208MH	91	5249C	114	5316	55	5417M	93	5441⅝	55	5530HL	58
4990 3/16 L	53	5208S	52	5249DL	114	5316H	55	5418	55	5441⅝ B	55	5530M	95
4990 7/32	53	5209M	91	5249DR	114	5316M	93	5418H	55	5444	56	5532	58
4990¼	53	5209S	52	5249H	114	5317M	93	5418M	93	5446	56	5532HL	58
4990¼L	53	5210	51	5249R	114	5318	55	5418S	55	5447	56	5532M	95
4990 5/16	53	5210BS	51	5249RK	114	5318H	55	5419	55	5449	56	5534	58
4990⅜	53	5210H	52	5249S	114	5318M	93	5419M	93	5449C	114	5534HL	58
4990 ⅜L	53	5210M	91	5249W	114	5319M	93	5420	55	5449DL	114	5535M	95
4991	53	5210S	52	5251	54	5320	55	5420H	55	5449DR	114	5536	58
4992	53	5211	51	5253	54	5320H	55	5420M	93	5449H	114	5536HL	58
4993	53	5211M	91	5254	54	5320M	93	5420S	55	5449R	114	5536M	95
4997	53	5212	51	5255	50	5320-50	45	5421	55	5449RK	56	5538	58
5000A	54	5212BS	51	5256	50	5321M	93	5421M	93	5449S	114	5538M	95
5000B	52	5212H	52	5257	53	5322	55	5422	55	5449W	114	5540	58
5000C-M	92	5212M	91	5257-50	53	5322H	55	5422H	55	5449-14	56	5540HL	58
5009M	91	5212S	52	5259	54	5322M	93	5422M	93	5449-14W	114	5541M	95
5010M	91	5213M	91	5260	54	5324	55	5422S	55	5450	56	5542	58
5011M	91	5214	51	5261	54	5324H	55	5423M	93	5450RK	114	5542HL	58
5012	52	5214BS	51	5262	54	5324M	93	5424	55	5451	56	5542M	95
5012H	52	5214H	52	5263	54	5325M	93	5424H	55	5453	56	5544	58
5012M	91	5214M	91	5265	53	5326	55	5424M	93	5460	56	5544HL	58
5013M	91	5214S	52	5266	53	5326H	55	5424S	55	5461	56	5546	58
5014	52	5215M	91	5267	53	5326HPA	55	5425	55	5463	56	5546HL	58
5014H	52	5216	51	5268	54	5326M	93	5425M	93	5464	56	5546M	95
5014M	91	5216BS	51	5270	54	5328	55	5426	55	5465	56	5548	58
5015M	91	5216H	52	5272H	53	5328H	55	5426H	55	5466	56	5548HL	58
5016	52	5216M	91	5272M	91	5330	55	5426M	93	5467	56	5550	58
5016H	52	5216S	52	5273	52	5330H	55	5426S	55	5468	56	5550M	95
5018	52	5217	51	5273H	53	5332	55	5427M	93	5469	56	5552	58
5818H	52	5217M	91	5273M	91	5332H	55	5428	55	5470	56	5552HL	58
5020	52	5218	51	5274	52	5334	55	5428H	55	5474M	93	5554	58
5020H	52	5218H	52	5274H	53	5336	55	5428M	93	5475	55	5554M	95
5020-50	52	5218M	91	5274LH	52	5340	55	5428S	55	5475M	93	5555M	95
5021-51	52	5219	51	5274M	91	5393	57	5429	55	5476	55	5556	58
5022	52	5219M	91	5275	52	5400AA	57	5429M	93	5477	55	5558	58
5022H	52	5220	51	5275H	53	5400AB	57	5430	55	5477M	93	5558M	95
5024	52	5220H	52	5275LH	52	5400D	82	5430H	55	5478M	93	5560	58
5024H	52	5220M	91	5275M	91	5400E	82	5430M	93	5480	56	5560M	95
5026	52	5221M	91	5276	52	5400F	57	5431	55	5480M	93	5564	58
5026H	52	5222	51	5276H	53	5400JA-M	94	5432	55	5482M	93	5568	58
5026HPA	52	5222H	52	5276LH	52	5400J-M	94	5432H	55	5485	56	5570	58
5026R	45	5222M	91	5276M	91	5400K-M	94	5432M	93	5485M	93	5572	58
5026RA	45	5224	51	5277	52	5400-OC	57	5432S	55	5493	110	5576	58
5026-50	52	5224H	52	5277H	53	5400P-M	95	5434	55	5496	110	5647	58
5028	52	5225	51	5277M	91	5410M	93	5434H	55	5500A	59	5649	58
5028H	52	5226	51	5278	52	5411M	93	5434S	55	5500D-M	96	5649C	114
5096	110	5226H	51	5278H	53	5412	55	5435M	93	5500E-M	96	5649DL	114
5200AA	54	5228	51	5278M	91	5412H	55	5436	55	5500NR	59	5649DR	114
5200AB	54	5228H	52	5279	52	5412M	93	5436H	55	5519M	95	5649H	114
5200D	54	5235	53	5279H	53	5412S	55	5436M	93	5521M	95	5649R	114
5200FA-M	92	5236	53	5280	54	5413M	93	5438	55	5522M	95	5649RK	58
5200F-M	92	5237	53	5285	54	5414	55	5438H	55	5523M	95	5649S	114
5200G	81	5240	53	5292	110	5414H	55	5438M	93	5524M	95	5649W	114
5200-M	92	5241	53	5293	110	5414M	93	5440	55	5525M	95	5650-1	114
5206BS	51	5242	53	5295	110	5414S	55	5440H	55	5526M	95	5650H	114
5206MH	91	5243	53	5296	110	5415M	93	5441½	55	5527M	95	5650R	114

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5650RK	59	6062	61	6600-20	41	6914PK	64	7186P	68	7316M	97	7416S	67
5650W	114	6063	61	6600-21	41	6914PKM	64	7187P	68	7316S	67	7417M	97
5653	58	6064	61	6600-22	41	6916H	64	7189P	68	7317M	97	7418H	66
5660	58	6065	61	6600-23	41	6916PK	64	7190P	68	7318H	66	7418HS	66
5661	58	6066	61	6600-24	41	6916PKM	64	7208PK	65	7318HS	66	7418M	97
5663	58	6069	61	6600-25	41	6925	64	7208S	65	7318M	97	7418PK	67
5668	59	6070	61	6600-26	41	6930	66	7210H	65	7318S	67	7418PKM	67
5670	58	6071	61	6600-50	41	6931	66	7210PK	65	7319M	97	7418S	67
5685	59	6420	61	6600-54	41	6935	67	7210PKM	65	7320H	66	7419M	97
5686	59	6425	61	6601-06	41	7010H	65	7210S	65	7320HS	66	7420H	66
5695	110	6435	61	6601-12	41	7012H	65	7211H	65	7320S	67	7420HS	66
5696	110	6519	48	6601-14	41	7014H	65	7212H	65	7321M	97	7420S	67
5700AA	60	6521	45	6601-16	41	7014HS	65	7212PK	65	7322H	66	7421M	97
5700B	60	6521A	45	6601-18	41	7016H	65	7212PKM	65	7322HS	66	7422H	66
5752	59	6521B	45	6601-20	41	7016HS	65	7212S	65	7322M	97	7422HS	66
5758	59	6524	45	6601-22	41	7018H	65	7214H	65	7322S	67	7422M	97
5760	59	6528	45	6601-24	41	7018HS	65	7214HS	65	7324H	66	7422S	67
5764	59	6539	45	6601-26	41	7020H	65	7214PK	65	7324HS	66	7423M	97
5772	59	6540	46	6601-50	41	7022H	65	7214PKM	65	7324M	97	7424H	66
5776	59	6541	46	6601-54	41	7024H	65	7214S	65	7324S	67	7424HS	66
5780	59	6542	46	6602-06	41	7100¼DD	112	7216H	65	7325M	97	7424M	97
5782	59	6545	46	6602-12	41	7100¼P	112	7216HS	65	7326H	66	7424S	67
5784	59	6546	46	6602-14	41	7100¼S	112	7216PK	65	7326HS	66	7425M	97
5788	59	6548	46	6602-16	41	7100⅜DD	112	7216PKM	65	7326M	97	7426H	66
5794	59	6548J	46	6602-18	41	7100⅜P	112	7216S	65	7326S	67	7426HS	66
5796	59	6549L	46	6602-20	41	7100⅜S	112	7218H	65	7328H	66	7426M	97
5800	59	6550	46	6602-22	41	7100½DD	112	7218HS	65	7328S	67	7426S	67
5812	59	6551	46	6602-24	41	7100½P	112	7218PKM	65	7330H	66	7427M	97
5848	60	6552	46	6602-26	41	7100½S	112	7218S	65	7330S	67	7428H	66
5848C	114	6553	46	6602-50	41	7100⅝DD	112	7220H	65	7332H	66	7428HS	66
5848DL	114	6553A	46	6602-54	41	7100⅝P	112	7220S	65	7332S	67	7428M	97
5848DR	114	6554	46	6603-20	41	7100⅝S	108	7222H	65	7334H	66	7428S	67
5848H	114	6555	46	6603-22	41	7102	64	7222S	65	7336CP	67	7430H	66
5848R	114	6556	46	6603-26	41	7103	64	7224H	65	7336H	66	7430M	97
5848S	114	6557	47	6603-70	41	7104	64	7270	66	7400A-M	97	7430S	67
5848W	114	6558	46	6603-80	41	7105	66	7270PF	112	7400D	67	7432H	66
5848-49RK	114	6559	46	6603-81	41	7106	66	7270PM	112	7401	62	7432M	97
5849	60	6560	46	6603-82	41	7107	66	7270PN	112	7402W	62	7432S	67
5850R	114	6561	47	6603-83	41	7111	66	7270SP	112	7408M	97	7434H	66
5852	60	6562	47	6734	47	7113	66	7270SR	112	7409M	97	7434S	67
5853	60	6563	47	6734H	47	7114	66	7273	65	7410M	97	7436H	66
5854	60	6564	46	6734S	47	7115	66	7273A	112	7411M	97	7438H	66
5861	60	6565	47	6906H	64	7121	67	7274	65	7412H	66	7440H	66
5863	60	6566	47	6906PK	64	7123	67	7274A	112	7412M	97	7470	67
5868	60	6567	47	6906PKM	64	7124	67	7275	65	7412PK	67	7470PF	112
5884	60	6568	47	6908H	64	7125	67	7275A	112	7412PKM	67	7470PM	112
5885	60	6569	47	6908PK	64	7126	67	7276	65	7412S	67	7470PN	112
5894	110	6574	47	6908PKM	64	7151	68	7276A	112	7413M	97	7470SP	112
5895	110	6575	47	6909H	64	7152	68	7277	65	7414H	66	7470SR	112
6006	61	6600-05	41	6909PK	64	7153	68	7277A	112	7414HS	66	7474	67
6006M	61	6600-06	41	6909PKM	64	7157	68	7308M	97	7414M	97	7474A	112
6008	61	6600-11	41	6910H	64	7175P	66	7309M	97	7414PK	67	7475	67
6015	61	6600-12	41	6910PK	64	7176P	66	7312H	66	7414PKM	67	7475A	112
6016	61	6600-13	41	6910PKM	64	7180P	67	7312M	97	7414S	67	7476	67
6016M	61	6600-14	41	6911H	64	7181P	67	7312S	67	7415M	97	7476A	112
6017	61	6600-15	41	6911PKM	64	7182P	67	7314H	66	7416H	66	7477	67
6018	61	6600-16	41	6912H	64	7183P	67	7314M	97	7416HS	66	7477A	112
6018M	61	6600-17	41	6912PK	64	7183-00	67	7314S	67	7416M	97	7478	67
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†T.M. Reg. U. S. Pat. Off. by Rosan Engineering Corp. Patents: 3,081,808; 3,137,186 & 3,190,169.

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FEELER GAUGES AND GAUGE SETS

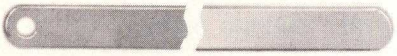
STANDARD FEELER GAUGES

Accurately ground and correctly heat treated to remain true after long use.

SHORT BLADES—

1/2" Wide, 3 1/16" Long

NO.*	WT., LB.	NO.*	WT., LB.	NO.*	WT., LB.
0015	.001	010	.004	019	.007
002	.001	011	.004	020	.008
003	.001	012	.004	022	.009
004	.002	013	.005	025	.010
005	.002	014	.005	030	.011
006	.003	015	.005	032	.013
007	.003	016	.006	035	.014
008	.004	017	.006	040	.016
009	.004	018	.007		



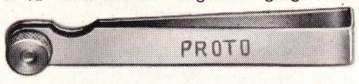
LONG BLADES— 1/2"Wide, 12" Long

NO.*	WT., LB.	NO.*	WT., LB.	NO.*	WT., LB.
0015L	.002	013L	.022	025L	.040
002L	.004	014L	.023	026L	.041
003L	.006	015L	.025	027L	.043
004L	.008	016L	.027	028L	.046
005L	.009	017L	.028	030L	.050
006L	.012	018L	.030	032L	.054
008L	.016	019L	.031	035L	.057
010L	.019	020L	.032	040L	.070
011L	.020	021L	.035		
012L	.021	022L	.036		

*No. Indicates Tool No. and Thickness in Thousandths of an inch (Except 0015 and 0015L, Which Indicate Thickness in Ten Thousandths).

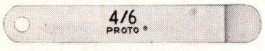
NO. 000L LONG FEELER GAUGE HOLDER

For 1/2" wide and 12" long feeler gauge blades.



NO. 000C FEELER GAUGE HOLDER

For 3 1/16" feeler gauge blades. Holds all available sizes. Holder fits these sets: 000A, 000AA, 000BB and 000N. Weight, .05 Lb.



STEP-CUT FEELER GAUGES

"Go and no-go" type, each blade having two different thicknesses. Width, 1/2". Length, 3 1/2".

NO.*	WT., LB.	NO.*	WT., LB.
004/6	.002	015/17	.008
005/7	.003	016/18	.008
006/8	.003	017/19	.009
007/9	.004	018/20	.009
008/10	.004	019/21	.010
009/11	.004	020/22	.010
010/12	.006	021/23	.009
011/13	.007	022/24	.009
012/14	.007	023/25	.010
013/15	.007	024/26	.011
014/16	.007	025/27	.011

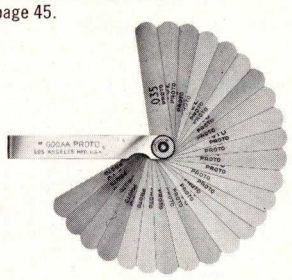
*No. Indicates Both Tool No. and Thicknesses in Thousandths of an inch.

NO. 000A STANDARD FEELER GAUGE SET

Nine short blades — 003, 004, 005, 006, 008, 010, 012, 015 and 018 — in 000C holder. Wt., .09 Lb.

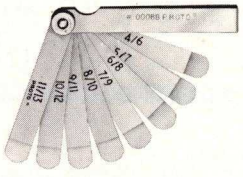
NO. 6521 OFFSET FEELER GAUGE FOR CUMMINGS DIESEL

See page 45.



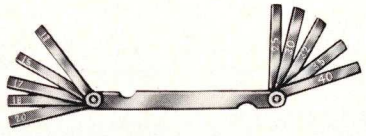
NO. 000AA STANDARD FEELER GAUGE SET

Master set with 25 short blades — 0015 through 040, except 019 — in 000C holder, Wt. .19 Lb.



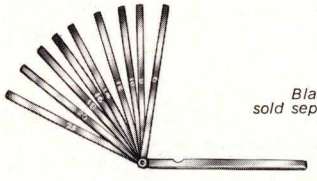
NO. 000BB STEP-CUT GAUGE SET

Master set, with eight gauges — 004/6 through 011/13 — in 000C holder. Wt., .08 Lb.



NO. 000D IGNITION GAUGE SET

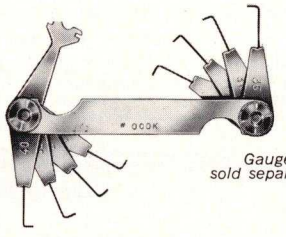
Ten 1/4" wide by 1 1/2" long blades — .013", .015", .017", .018", .020", .025", .030", .032", .035" and .040" thick — in holder. Wt., .03 Lb.



Blades not sold separately.

NO. 000E BRAKE GAUGE SET

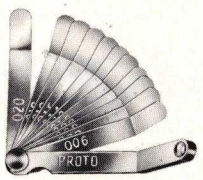
Nine 1/4" wide by 4" long blades — .006", .008", .010", .012", .014", .016", .018", .020" and .025" thick — in holder. Wt., .04 Lb.



Gauges not sold separately.

NO. 000K SPARK PLUG GAUGE SET

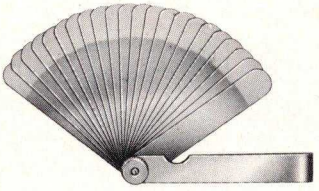
For checking spark plug gaps, including electrode bender. Eight bent-wire gauges — .022", .025", .027", .028", .030", .032", .035" and .040" thick — in holder. Wt., .06 Lb.



Blades not sold separately.

NO. 000M BENT GAUGE SET

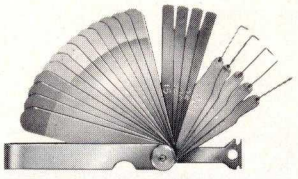
Eleven 1/2" by 4 3/16" bent blades—.006", .008", .010", .011", .012", .013", .014", .015", .018", .019" and .020" — in holder. Wt., .15 Lb.



NO. 000N MASTER FEELER GAUGE SET

22 straight tempered steel blades accurately step-ground to give .002" tolerance. With a range from .004" to .027", the new No. 000N handles most maintenance and repair requirements for engine valves, bearings, mating parts, setting up cross slides, gibs.

004/6, 005/7, 006/8, 007/9, 008/10, 009/11, 010/12, 011/13, 012/14, 013/15, 014/16, 015/17, 016/18, 017/19, 018/20, 019/21, 020/22, 021/23, 022/24, 023/25, 024/26, 025/27. Wt., .25 Lb.

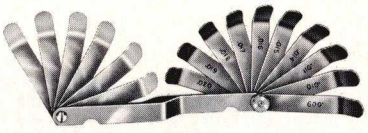


NO. 000P FORD MASTER GAUGE SET

22 different gauges and one spark plug electrode bending tool. All the sizes and types of gauges needed for late model Ford engines. Thirteen step-ground "go-and-no-go" blades give clearance .010/12" to .025/27".

010/12, 011/13, 012/14, 013/15, 014/16, 015/17, 016/18, 017/19, 018/20, 019/21, 021/23, 024/26, 025/27.

Four step-ground ignition blades will set points accurately at .015", .016", .020", or .025". For spark plug gaps, three 90° offset blades are provided in .025" to .028" and .035" sizes. Two straight wire blades for voltage regulator setting — in .017" and .030" sizes. Wt., .25 Lb.



NO. 000R UNIVERSAL OVERHEAD VALVE GAUGE SET

16 bent feeler gauges from .009" to .027". Each blade is offset at the right angle to protect mechanic's hands from hot manifolds while setting overhead valves on all late model cars. Each blade may be tightened securely in working position. Sizes are etched in each tempered steel blade. All blades are accurately ground and precision tested. Wt., .20 Lb.

009, 010, 011, 014, 015, 016, 017, 018, 019, 020, 021, 023, 024, 025, 026, 027.

PLUMBING TOOLS

PROTO PROFESSIONAL TOOLS

Proto is one of the world's largest producers of professional quality plumbing tools, and provides the most complete line available. You will find many other tools in this catalog needed for plumbing, heating, ventilating and air conditioning work.

5 7/16-5 3/4

FLOOR OR WOOD CHISELS

NO.	STOCK SIZE	WIDTH OF CUT	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
5 7/16	7/16"	5/8"	3 13/32"	9 1/2"	.36
5 1/2	1/2"	3/4"	3 19/64"	9 5/8"	.50
5 5/8	19/32"	1"	3 11/64"	9 13/16"	.70
5 3/4	23/32"	1 13/16"	4 1/2"	10"	1.00

* STAR DRILLS

13 1/4	1/4"	1/4"	—	12"	.16
13 5/16	1/4"	3/8"	—	12"	.16
13 3/8	5/16"	3/8"	—	12"	.26
13 1/2	3/8"	1/2"	—	12"	.38
13 5/8	7/10"	21/32"	—	12"	.52
13 3/4	1/2"	27/32"	—	12"	.70
13 7/8	19/32"	31/32"	—	12"	1.07
13-1	23/32"	1 3/32"	—	12"	1.52

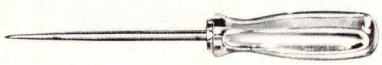
*Federal Specs.: GGG-D-691, Type I.

SOIL PIPE CHISELS

37 1/2	1/2"	5/8"	2 1/8"	6 1/2"	.35
37 5/8	19/32"	3/4"	2 3/8"	7"	.57
37 3/4	23/32"	7/8"	2 7/8"	7 1/2"	.84

CONCRETE GADS

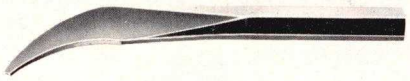
84 3/4	23/32"	—	2 1/8"	12"	1.40
84 7/8	1 3/16"	—	2 1/2"	12"	1.80
84-1	1 5/16"	—	2 3/4"	12"	2.3



NO. 19 SCRATCH AWL

Alloy steel blade, comfortable moulded-on plastic handle makes this an ideal tool for scribing, sheet metal layout, probing, and many other uses. Should be in every mechanic's tool box.

19	1/4"	—	4 3/4"	8 3/4"	.17



LEAD-PICKING TOOL

NO.	STOCK SIZE	WIDTH OF CUT	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
112	1/2"	3/16"	2"	9"	.46

CARBIDE POWER TYPE MASONRY DRILLS

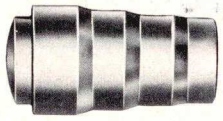
For fast, accurate drilling of concrete, tile, bricks, slate, marble, rock, stone, plastics, glass, steel, plaster, asphalt, and micarta. Have sharp tungsten carbide cutters and three or more spirals. Solid type leaves no dead center. Hollow core type removes drilled materials quickly.

SOLID SHAFT TYPE

NO.	HOLE SIZE	SHANK DIAMETER	OVERALL LENGTH	WT., LBS.
11 3/16	3/16"	3/16"	4"	.03
11 1/4	1/4"	1/4"	5"	.06
11 5/16	5/16"	1/4"	5"	.06
11 3/8	3/8"	1/4"	5"	.09
11 7/16	7/16"	1/4"	5"	.11
11 1/2	1/2"	1/4"	6"	.18

HOLLOW CORE TYPE

12 5/8	5/8"	3/8"	8"	.24
12 3/4	3/4"	3/8"	8 1/2"	.32
12 7/8	7/8"	1/2"	9"	.54
12-1	1"	1/2"	9"	.60
12-1 1/8	1 1/8"	1/2"	10"	.78



NO. 136 TUBING EXPANDER

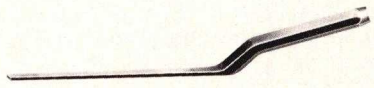
A very handy tool for plumbers and others who work with tubing. Three separate steps expand 1 1/4", 1 3/8" and 1 1/2" tubing. Length, 3 1/8". Weight, .86 Lb.

NO. 137 TUBING EXPANDER

Precision made, hardened alloy steel for swedging 3/8", 1/2" and 3/4" nominal diameter copper tubing. Black finish. A must for use on copper tubing in plumbing, industrial maintenance and many other fields. Length 8". Wt. 1.18 Lbs.

SPRING YARNING IRONS

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
6 1/2 x 12	1 9/32"	1/16"	5/8"	6 1/2"	12"	.45
6 5/8 x 12 1/2	1 9/32"	3/32"	3/4"	7"	12 1/2"	.64
6 5/8 x 18	1 9/32"	3/32"	3/4"	13"	18"	.80



OFFSET YARNING IRONS

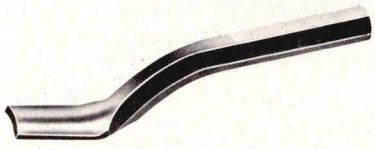
14 1/2 x 12 1/2	1 9/32"	1/16"	5/8"	6 3/4"	12 1/2"	.52
14 5/8 x 13	1 9/32"	3/32"	1 1/16"	7 1/4"	13"	.79
14 5/8 x 19	1 9/32"	3/32"	1 1/16"	12 3/4"	19"	.99
14 3/4 x 15	23/32"	3/32"	3/4"	9 1/2"	15"	1.18

CURVED PONY CALKERS / Inside & Outside

21 1/2 in	1/2"	1/8"	3/4"	1 1/4"	3"	.13
21 1/2 Out	1/2"	1/8"	3/4"	1 1/4"	3"	.13

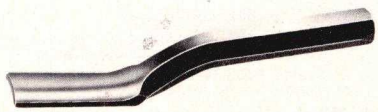
LONG CALKERS / Inside & Outside

33 1/2 In	1/2"	7/64"	3/4"	1 1/2"	6 1/2"	.32
33 1/2 Out	1/2"	7/64"	3/4"	1 1/2"	6 1/2"	.32
33 5/8 In	19/32"	5/32"	7/8"	1 3/4"	7"	.52
33 5/8 Out	19/32"	5/32"	7/8"	1 3/4"	7"	.52



OFFSET CALKERS / Inside & Outside

033 1/2 In	1/2"	7/64"	3/4"	1 1/2"	6 1/2"	.33
033 1/2 Out	1/2"	7/64"	3/4"	1 1/2"	6 1/2"	.33
033 5/8 In	19/32"	1/8"	7/8"	1 5/8"	7"	.57
033 5/8 Out	19/32"	1/8"	7/8"	1 5/8"	7"	.57

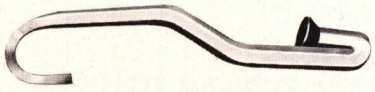


WATER MAIN CALKERS

109	23/32"	3/16"	1"	2 11/16"	8"	.83

BROAD CURVED-NOSE CALKING IRON

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
110	19/32"	1/8"	1 1/2"	2"	8 1/2"	.71

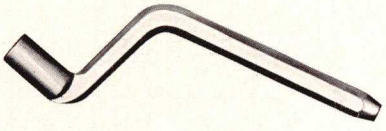


CEILING CALKER

130	19/32"	5/32"	11/16"	1 5/8"	10"	1.20

LONG GASKET CALKERS

131 5/8	19/32"	5/32"	7/8"	4"	9 1/2"	.67
131 3/4	23/32"	3/16"	1"	4 1/4"	9 1/2"	.98



LEFT AND RIGHT CALKERS

132L	19/32"	5/32"	7/8"	1 5/8"	8 7/8"	.87
132R	19/32"	5/32"	7/8"	1 5/8"	8 7/8"	.87

140

140A

INTERNAL PIPE WRENCHES

Screw mandrel to force gripping dogs equally against interior of broken pipe or close nipples. Then turn with wrench. No hammering to release.

No. 140A—Set of all 3 wrenches in plastic kit. Weight, 1.44 Lbs.

NO.	PIPE SIZE	OVERALL LENGTH	WT., LBS.	SPARE SET OF 3 JAWS NO.	SPARE SCREW NO.
140	1/2"	3 5/8"	.30	140J	140S
141	3/4"	3 3/4"	.51	141J	141S
142	1"	3 3/4"	.57	142J	142S

For 9500 Screw and Pipe Extractors see page 6.

PUNCHES AND CHISELS

ALIGNING PUNCH

NO.	END DIA.	STOCK	LENGTH	WT., LBS.
15 5/8	3/16"	19/32" Hex.	16"	.95

CENTER PUNCHES

41 1/4	—	1/4" Hex.	4 9/32"	.05
41 5/16	—	5/16" Hex.	4 21/32"	.09
41 3/8	—	3/8" Hex.	4 7/8"	.13
41 7/16	—	7/16" Hex.	5 1/4"	.19
41 1/2	—	1/2" Hex.	5 5/8"	.26
41 5/8	—	19/32" Hex.	6 3/16"	.44

PRICK PUNCHES

44 1/4	3/32	1/4" Hex.	4 25/32"	.05
44 5/16	7/64	5/16" Hex.	5 1/32"	.09
44 3/8	1/8	3/8" Hex.	5 9/32"	.13

RIVET OR PIN PUNCHES

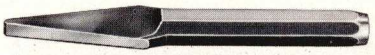
47 1/4 x 1/16	1/16"	1/4" Hex.	4 3/8"	.05
47 1/4 x 3/32	3/32"	1/4" Hex.	4 3/4"	.05
47 5/16 x 1/8	1/8"	5/16" Hex.	5 1/4"	.09
47 5/16 x 5/32	5/32"	5/16" Hex.	5 5/8"	.10
47 3/8 x 3/16	3/16"	3/8" Hex.	6 1/8"	.15
47 7/16 x 7/32	7/32"	7/16" Hex.	6 1/2"	.20
47 1/2 x 1/4	1/4"	1/2" Hex.	6 3/4"	.30

STARTING PUNCHES

50 3/16	1/16"	3/16" Hex.	4 9/32"	.03
50 1/4	3/32"	1/4" Hex.	4 21/32"	.05
50 5/16	1/8"	5/16" Hex.	5 5/32"	.10
50 3/8	3/16"	3/8" Hex.	5 5/8"	.15
50 7/16	7/32"	7/16" Hex.	6"	.23
50 1/2	1/4"	1/2" Hex.	6 1/2"	.31

LONG TAPER DRIFT PUNCHES

96 1/4	3/32"	1/4" Hex.	10 1/8"	.11
96 5/16	1/8"	5/16" Hex.	10 1/8"	.18
96 3/8	3/16"	3/8" Hex.	10 1/8"	.27
96 7/16	7/32"	7/16" Hex.	10 3/16"	.35
96 1/2	1/4"	1/2" Hex.	10 3/16"	.46
96 5/8	5/16"	19/32" Hex.	10 3/16"	.73
96 3/4	3/8"	23/32" Hex.	10 1/4"	1.02



CAPE CHISELS

NO.	CUT	STOCK	LENGTH	WT., LBS.
72 1/4	1 1/64"	1/4" Hex.	4 5/8"	.05
72 5/16	1 3/64"	5/16" Hex.	5 1/8"	.09
72 3/8	1 7/64"	3/8" Hex.	5 5/8"	.16
72 1/2	2 1/64"	1/2" Hex.	6 3/16"	.27
72 5/8	3/8"	19/32" Hex.	6 9/16"	.46

DIAMOND POINT CHISELS

76 1/4	5/32"	1/4" Hex.	4 5/8"	.06
76 5/16	3/16"	5/16" Hex.	5 1/8"	.10
76 3/8	1/4"	3/8" Hex.	5 5/8"	.15
76 1/2	5/16"	1/2" Hex.	6 1/8"	.28
76 5/8	3/8"	19/32" Hex.	6 1/2"	.48

HALF ROUND-NOSE CAPE CHISELS

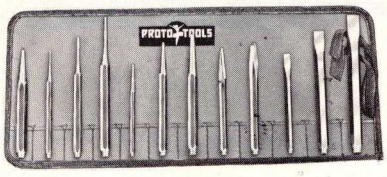
80 1/4	1 1/64"	1/4" Hex.	4 5/8"	.06
80 5/16	1 3/64"	5/16" Hex.	5 1/8"	.10
80 3/8	1 7/64"	3/8" Hex.	5 5/8"	.15
80 5/8	3/8"	19/32" Hex.	6 1/2"	.49

COLD CHISELS

86A 3/16	1/4"	3/16" Hex.	4 7/8"	.03
86A 1/4	5/16"	1/4" Hex.	5 1/8"	.07
86A 5/16	3/8"	5/16" Hex.	5 3/8"	.12
86A 3/8	7/16"	3/8" Hex.	5 1/2"	.16
86A 7/16	1/2"	7/16" Hex.	6 3/16"	.24
86A 1/2	5/8"	1/2" Hex.	6 11/16"	.35
86A 5/8	3/4"	19/32" Hex.	7"	.57
86A 3/4 x 8	7/8"	23/32" Hex.	8"	.88
86A 3/4 x 12	7/8"	23/32" Hex.	12"	1.44
86A 7/8 x 8	1"	13/16" Hex.	8 1/4"	1.26
86A 7/8 x 12	1"	13/16" Hex.	12 1/4"	1.94
86A1 x 8	1 3/16"	15/16" Hex.	8 1/4"	1.64

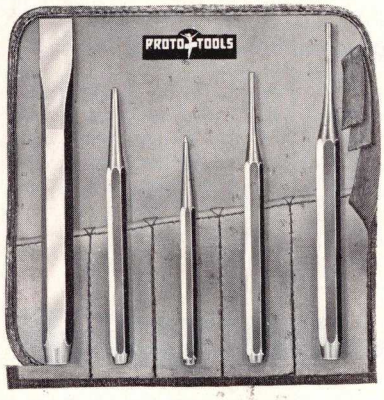
PROTO PROFESSIONAL TOOLS

PUNCH AND CHISEL SETS



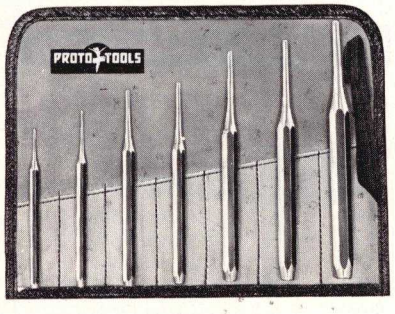
NO. 2 SET

A fine selection, providing the twelve punches and chisels used most frequently in practically all types of work. Includes Center Punch 41 3/8; Rivet or Pin Punches 47 1/4 x 3/32, 47 5/16 x 1/8 and 47 3/8 x 3/16; Starting Punches 50 3/16, 50 5/16 and 50 3/8; Cape Chisel 72 5/16; Diamond Point Chisel 76 5/16, and Cold Chisels 86A 1/4, 86A 3/8 and 86A 7/16 in a red Vinyl Kit No. 2402. Weight, 1.55 Lbs.



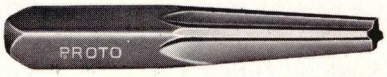
NO. 3 SET

A useful set, including Center Punch 41 3/8; Rivet or Pin Punches 47 5/16 x 1/8 and 47 3/8 x 3/16; Starting Punch 50 5/16, and Cold Chisel 86A 1/2 in Vinyl Kit No. 2411. Weight, .95 Lb.



NO. 47A SET

A handy master set of rivet or pin punches with all of the sizes available. Includes 47 1/4 x 1/16, 47 1/4 x 3/32, 47 5/16 x 1/8, 47 5/16 x 5/32, 47 3/8 x 3/16, 47 7/16 x 7/32 and 47 1/2 x 1/4 in red Vinyl Kit No. 2403. Weight, 1.10 Lbs.



SCREW AND PIPE EXTRACTORS

These extractors are the fastest type obtainable for removing broken screws, studs, bolts, pipe and fittings. They are vastly superior to other designs for several reasons: (1) Only three quick steps are required. (2) Even if hole is drilled clear through, extractor will not chew up object as do other types. (3) Sharp edges bite positively. (4) Gradual taper of flutes prevents wedging and binding. (5) Objects with right or left threads may be removed. (6) Special alloy steel provides long life.

Fedl. Specs.: GGG-E-936, Type I, Class 2.

NO. 9500 A SCREW EXTRACTOR SET

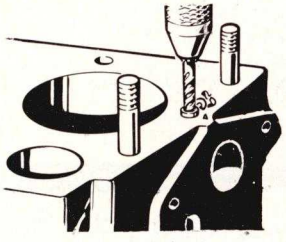
Includes the five most popular sizes of extractors —Nos. 9521, 9522, 9523, 9524 and 9525—and a handy, vinyl plastic kit. Wt., .26 Lb.

NO.	SIZE OF SMALL END	SIZE OF SHANK	OVERALL LENGTH	U.S.S. SCREW, STUD OR BOLT SIZE	DRILL SIZE	MINIMUM DEPTH OF HOLE	PIPE SIZE	WT., LBS.
9521	1/8"	3/16"	2 5/8"	1/4, 5/16	1/8"	3/8"	1/8"	.01
9522	11/64"	3/16"	2 5/8"	3/8	3/16"	1/2"	—	.02
†9523	13/64"	1/4"	2 7/8"	7/16"	15/64"	1/2"	1/8"	.04
9524	19/64"	5/16"	3"	1/2", 9/16"	5/16"	1/2"	1/4"	.06
9525	11/32"	3/8"	3 1/4"	5/8	3/8"	5/8"	3/8"	.10
9525B	27/64"	7/16"	3 7/8"	3/4	15/32"	11/16"	—	.17
9526	1/2"	1/2"	4 1/2"	7/8	9/16"	11/16"	1/2"	.23
9527	19/32"	5/8"	4 7/8"	1, 1 1/8	21/32"	3/4"	1/2"	.40
9528	23/32"	3/4"	5 3/8"	1 1/4, 1 3/8	13/16"	3/4"	3/4"	.65
9529	31/32"	1"	5 1/2"	1 1/2	1 1/16"	3/4"	1"	1.12

†*For Broken Grease Fittings*

HOW TO USE

1. Drill hole.
2. Drive in extractor and turn out broken object.
3. Tap wrench is recommended for ease and safety in removing broken objects.

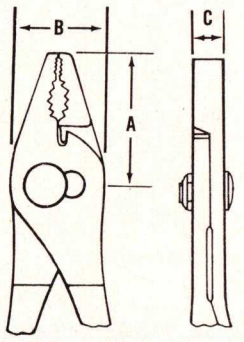


No. 9500M
Screw and Pipe Extractor Merchandiser

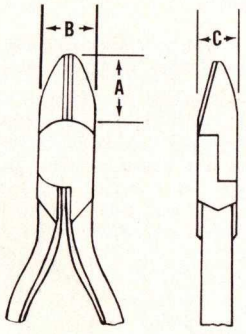
PLIERS

Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)
(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.)

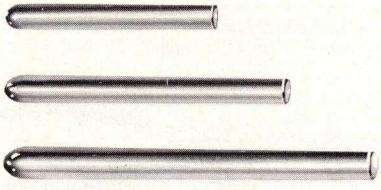
You will find the right pliers for every job among the many types and sizes in the Proto line. And the highest quality. Skilled workmen with modern equipment forge and machine these pliers to highest standards. They are easy to work, have good balance and "feel," correct leverage. Gripping teeth are properly shaped. Sharp cutting edges are perfectly matched and built for hard use. Handles are shaped for comfortable, sure grip.



Slip Joint Slip Joint



Diagonal Diagonal

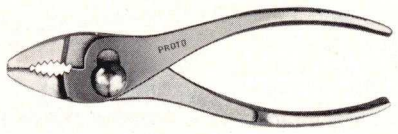


"HANDEZE"® PLASTIC GRIPS FOR TOOL HANDLES

Red vinyl plastisol grips enhance appearance, increase gripping power and reduce muscle fatigue. They slip on easily, fit tight, wear long, and are replaceable. Many pliers are available with factory-fitted "Handeze" grips.

†NO.	SIZE	FIT PLIERS	INSIDE DIAM.	LENGTH	WT., LBS.
200S	Small	4" to 6"	1/4"	3"	.02
200M	Medium	6" to 8"	5/16"	4"	.04
200L	Large	8" to 12"	3/8"	5"	.05

†Covers pair of grips, individually packed by pairs.

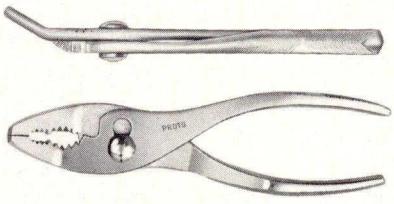


NOS. 201 & 202 THIN NOSE SLIP JOINT PLIERS

Designed with a slim nose to reach into tight places. Has two jaw-opening adjustments and shear-type wire cutter. Two sizes. Chromed.

NO.	LENGTH	WT., LBS.	BOLT & NUT NO.
201	5 17/32"	.25	240-BN
202	6 29/64"	.32	202-BN

NO.	A	B	C
201	1 5/64"	1 1/16"	1 1/64"
202	1 7/16"	1 1/16"	1 3/64"

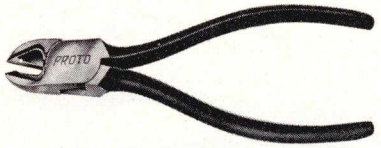


NO. 203 THIN BENT NOSE SLIP JOINT PLIER

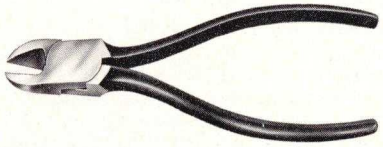
Made with 30° offset thin nose which reaches into many places inaccessible with straight nose pliers. Has two jaw-opening adjustments and wire cutter of shear type. Chromed.

NO.	LENGTH	WT., LBS.	BOLT & NUT NO.
203	6 11/16"	.40	202-BN

A	B	C
1 41/64"	1 1/4"	1 3/64"



206T



NOS. 204, 205, 206, 207 DIAGONAL CUTTING PLIERS

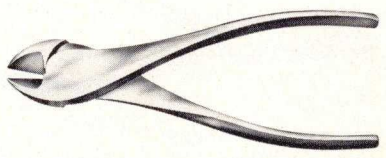
Thin, narrow jaws work easily in confined places. Useful for switchboard, telephone, ignition, electronic and electrical work. Induction-hardened cutting edge. High quality alloy steel.

See page 112 for spare parts listing.

NOS. 204, 205, 206, 207 DIAGONAL CUTTING PLIERS

NO.	LENGTH	WT., LBS.	A	B	C
204	4 21/32"	.16	2 3/32"	9/16"	1 1/32"
204G	4 21/32"	.16	2 3/32"	9/16"	1 1/32"
204SG	4 21/32"	.18	2 3/32"	9/16"	1 1/32"
205	5 1/8"	.26	3/4"	5/8"	3/8"
205G	5 1/8"	.26	3/4"	5/8"	3/8"
205SG	5 1/8"	.26	3/4"	5/8"	3/8"
206	6 1/8"	.31	2 7/32"	49/64"	29/64"
206G	6 1/8"	.34	2 7/32"	49/64"	29/64"
206T	6 1/8"	.31	2 7/32"	49/64"	29/64"
207	7 1/4"	.46	1 1/16"	15/16"	29/64"
207G	7 1/4"	.48	1 1/16"	15/16"	29/64"

G-With Plastisol dipped handles
T —Red plastic "Snip-Grip" inserts on cutting edges hold wire ends, prevent shorts, machine failures, eye injury.
S —Has coil spring. Won't pinch fingers.



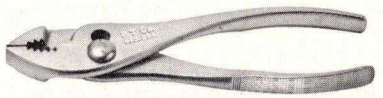
NOS. 209, 209G HEAVY DUTY DIAGONAL CUTTING PLIERS

Powerful cutter, with joint close to short jaws for great leverage. Cuts heavy wire with little effort. Induction-hardened. High quality alloy.

NO.	LENGTH	WT., LBS.	A	B	C
209	7 1/16"	.47	2 5/32"	1 3/16"	1 5/32"
209G	7 1/16"	.51	2 5/32"	1 3/16"	1 5/32"

G-With Plastisol dipped handles

P-T-CO. COMBINATION PLIER



P6, P8 SINGLE PACK

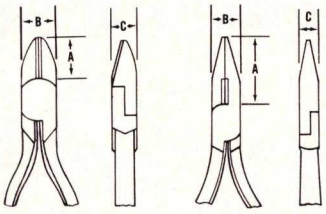
One plier in metal edge box.

Forged and heat treated from special analysis steel for long service. This quality engineered plier has a heat-treated, nickel-plated bolt and nut. Precision broached jaws with sharp serrations incorporate a utility wire cutter. Broad, comfortable handles have a non-slip knurled grip. Bright plate finish.

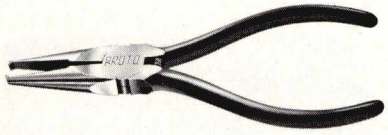
NO.	LENGTH	PKG.	WT., LBS.
P6	6"	Single Pack	.49
P8	8"	Single Pack	.62
P6A	6"	12 Pack	5.64

PLIERS

Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)
(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.)



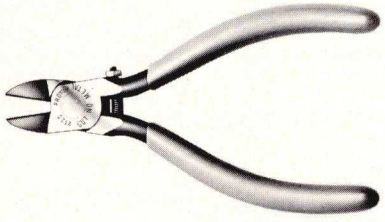
Diagonal Chain Nose



NO. 211S TRANSVERSE CUTTING PLIERS WITH SPRING

A precision electronic plier. Gets into those places inaccessible to most conventional diagonal pliers, for quick, clean cuts. Induction-hardened cutting edges. High quality alloy steel.

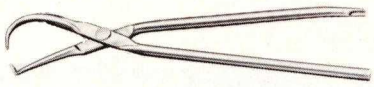
NO.	LENGTH	WT., LBS.	A	B	C
211S	6 1/8"	.32	1 3/8"	43/64"	3/8"



NO. 212G PROTO PLASTIC CUTTER

Perfect for cutting plastic parts from injection mold sprue and other uses. Adjusting set screw — 1/16" Hollow head screw—Keeps knife-like cutting edges from damaging each other. Insures fast, precise cutting! Not to be used for metal. Protoloy steel for long service — minimum maintenance. Provides completely smooth action via special lubrication around heat treated pivotal joint pliers scientifically designed for cutting plastics. Performance efficiency enhanced by adjustable coil spring tension. Precision machined, heat treated, induction hardened cutting edges. Plastisol "Handeze" grips for cushioned comfort.

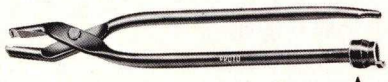
NO.	LENGTH	WT., LBS.	HANDLE
212G	6 1/8"	.41	Cushioned



NO. 215 BRAKE SPRING PLIERS

Curved jaw clears edge of brake shoe to bring it in close adjustment with center line of spring. Thin hooked jaw slips easily under spring. A necessary plier for auto mechanics. Tough, high quality alloy.

NO.	LENGTH	WT., LBS.
215	12 1/2"	.69

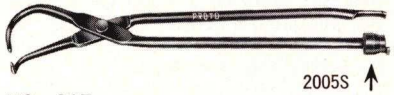


2005S

NO. 216 BENDIX BRAKE PLIERS

Three tools in one! Speeds and simplifies Bendix brake repairs. Special jaws remove hold down cups. Replaceable Bendix Socket on one handle fits over anchor pin and lug lifts off anchor springs. Other handle end has shovel for replacing anchor pin springs. Tough, high quality alloy.

NO.	LENGTH	WT., LBS.	REPLACEABLE BENDIX SOCKET NO.
216	11 1/8"	.68	2005S

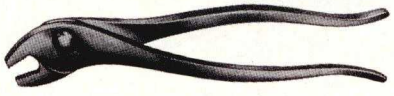


2005S

NO. 217 ALL-PURPOSE BRAKE PLIERS

Combines jaws of No. 215 Brake Spring Plier and handle end features of No. 216 Bendix Brake Plier.

NO.	LENGTH	WT., LBS.	REPLACEABLE BENDIX SOCKET NO.	BENDIX BRAKE TOOL NO.
217	12 3/4"	.75	2005S	200-S

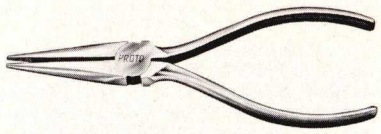


NOS. 218, 218G ANGLE NOSE BATTERY PLIERS WITH SLIP JOINT

Thin jaws at 30° angle make terminal nuts easily accessible. No matter what condition the nuts or bolts are in from corrosion or tool damage, the gripping jaws take a sure hold.

NO.	LENGTH	WT., LBS.	A	B	C
218	7 7/8"	.42	19/32"	1 1/8"	11/32"
218G	7 7/8"	.42	19/32"	1 1/8"	11/32"

G-With Plastisol dipped handles



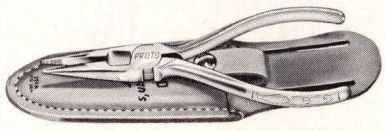
NOS. 220, 220G LONG CHAIN NOSE PLIERS

Diamond-serrated jaws and long, slim nose make loops and bends in tight places. Absence of side cutter prevents cutting by mistake. Handy for various types of electrical work. Tough, high quality alloy.

NO.	LENGTH	WT., LBS.
220	6 23/32"	.34
220G	6 23/32"	.36

NO.	A	B	C	E
220	1 31/32"	1 1/16"	3/8"	3/32"
220G	1 31/32"	1 1/16"	3/8"	3/32"

G-With Plastisol dipped handles



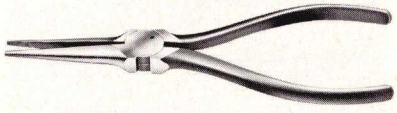
NOS. 221, 221A, FISHERMAN'S PLIERS, WITH OR WITHOUT SHEATH

Sportsman's all-purpose plier. Needle nose jaws extract hooks, attach sinkers, cut leaders, tie flies, skin fish, repair reels, fix outboard motors. Heavy chrome plate. Fish knurl handles give sure grip. Belt-type, saddle leather, gold embossed sheath. Strap with snap button. Induction-hardened. High quality alloy. Makes perfect gift.

NO.	LENGTH	WT., LBS.
221	6 23/32"	.29
221-A	6 23/32"	.35
221-S	9"	.07

NO.	A	B	C	D	E
221	1 31/32"	1 1/16"	3/8"	15/32"	3/32"
221-A	1 31/32"	1 1/16"	3/8"	15/32"	3/32"

A—Plier with Sheath. S—Sheath only.
Sheath—9" long x 2 3/4" wide



NOS. 222, 222G LONG NEEDLE NOSE PLIERS

Has very thin nose for getting into places with restricted clearance. Needed for many jobs but especially useful for television, radio and all types of electronics work. High quality alloy steel.

NO.	LENGTH	WT., LBS.
222	6 27/32"	.26
222G	6 27/32"	.30

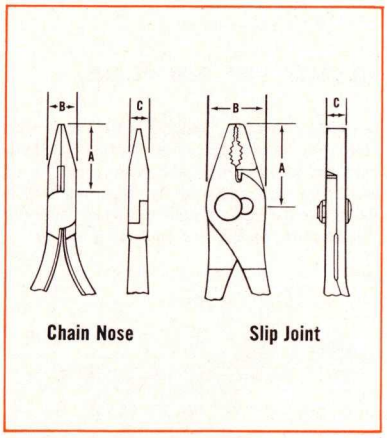
NO.	A	B	C	D	E
222	2 3/32"	1 1/16"	3/8"	—	3/32"
222G	2 3/32"	1 1/16"	3/8"	—	3/32"

G-With Plastisol dipped handles

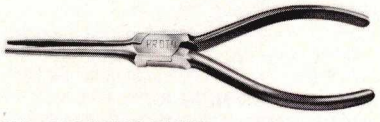
See page 112 for spare parts listing.

PLIERS

Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)
(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.).



Chain Nose **Slip Joint**

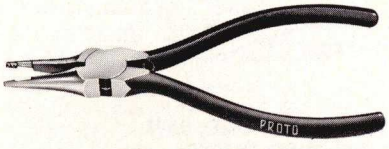


NO. 223 LONG THIN NEEDLE NOSE PLIERS

Extra slim-nosed electronic plier for gripping, looping and twisting wire and for light, confined precision work. High quality alloy steel.

NO.	LENGTH	WT., LBS.
223	6 1/16"	.16

A	B	C	D	E
2 1/4"	15/32"	19/64"	—	3/32"

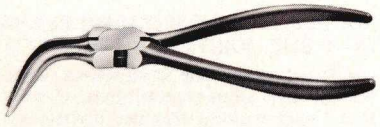


NO. 224 ELECTRONICS & IGNITION CUTTING PLIERS

Slim needle nose type with cutter only 3/16" back from tip. For reaching into close quarters to pull or cut wire. Coil spring holds plier in open position. Used for ignition, television, radio and other electronics assembly repair work. Induction-hardened cutters. High quality alloy.

NO.	LENGTH	WT., LBS.
224	6 1/8"	.25

A	B	C	D	SPARE HANDLE SPRING
1 3/8"	11/16"	3/8"	1/4"	285S-S



NOS. 225, 225G CURVED THIN NEEDLE NOSE PLIERS

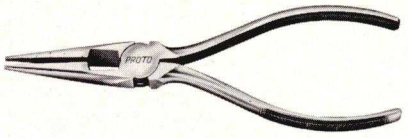
Same as No. 222 plier, except nose is bent at 78° angle. For reaching around obstructions.

NOS. 225, 225G CURVED THIN NEEDLE NOSE PLIERS

NO.	LENGTH	WT., LBS.
225	6"	.26
225G	6"	.30

NO.	A	B	C	D	E
225	1 1/4"	1 1/16"	3/8"	—	3/32"
225G	1 1/4"	1 1/16"	3/8"	—	3/32"

G-With Plastisol dipped handles



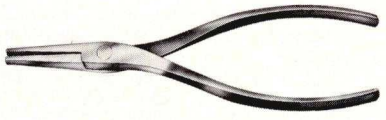
NOS. 226, 226G NEEDLE NOSE SIDE CUTTING PLIERS

The long nose, strong, extra sharp induction-hardened cutters make an ideal combination for electronic, telephone and other electrical work. A good long-reach plier for many types of jobs. High quality alloy.

NO.	LENGTH	WT., LBS.
226	6 23/32"	.29
226G	6 23/32"	.33

NO.	A	B	C	D	E
226	1 31/32"	1 1/16"	3/8"	15/32"	3/32"
226G	1 31/32"	1 1/16"	3/8"	15/32"	3/32"

G-With Plastisol dipped handles



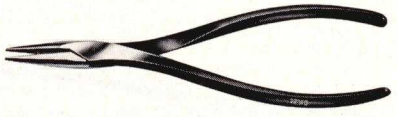
NOS. 227, 227G DUCKBILL PLIERS

A useful plier for carburetor, radio, refrigerator, TV, office machine and many other types of work. Long handles provide powerful leverage. Jaws have versatile diamond knurled teeth for positive gripping.

NO.	LENGTH	WT., LBS.
227	7 7/8"	.31
227G	7 7/8"	.35

NO.	A	B	C	D	E
227	1 3/8"	9/16"	7/16"	—	1/8"
227G	1 3/8"	9/16"	7/16"	—	1/8"

G-With Plastisol dipped handles



NO. 228 LONG REACH NEEDLE NOSE PLIERS

For drawing and looping wire, working in close quarters, and reaching way back into assemblies. Diamond knurled teeth permit pulling or side holding grip. 1 3/8".

NO.	LENGTH	WT., LBS.
228	7 7/8"	.36

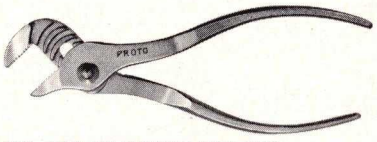
NO.	A	B	C	D	E
228	1 3/8"	9/16"	7/16"	—	5/64"

NOS. 230 & 235 MIDGET SLIP JOINT IGNITION PLIERS

Light and convenient to use. Designed for ignition work or other jobs requiring narrow jaws. Has three jaw opening adjustments. Protected from rust by Parco-Lubrite finish, (No. 230) or Chrome Plating (No. 235).

NO.	LGTH.	WT., LBS.	A	B	C
230	4 9/16"	.09	7/16"	29/32"	3/16"
235	4 9/16"	.09	7/16"	29/32"	3/16"

SPARE BOLT AND NUT NO. 235-BN

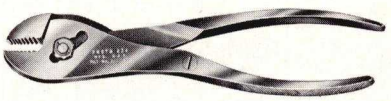


NO. 231 5" POWER TRACK® IGNITION PLIERS

Size permits easy entry into confined areas! Angled head gets around obstructions! Curved Power Track® (tongue-and-groove joint) insures parallel jaws for fast positive adjustments . . . maximum gripping power. Drop-forged heat-treated alloy-steel, nickel chrome finish. Designed to grip distributor and voltage regulator nuts. Packaging 1 per box.

NO.	LENGTH	LENGTH OF JAW	WIDTH OF JAW	JAW THICKNESS	WT., LBS.
231	5"	1/2"	1"	.20	.10

SPARE BOLT AND NUT NO. 231-50

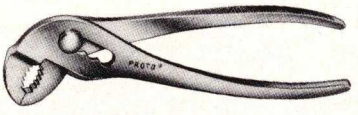


NO. 234 "MULTI-PLIERS"

"A chest of tools in one." This revolutionary plier is perfect for countless jobs, and is a "must" for all tool users. Patented, three-piece compound-leverage design multiplies applied pressure ten times! Non-slip jaws open to 1 1/4". Unique diagonal four-position slot gives closer; easier jaw adjustments, reduces wedge action and wear. Alloy steel. Chromed.

NO.	LENGTH	WT., LBS.	A	B	C
234	7 13/16"	.51	7/8"	1 3/8"	15/32"

SPARE NUT NO. 234-N



NO. 238 PARROT NOSE WRENCH PLIERS

Combination plier and pipe wrench, with 75° offset nose. No. 238 has four adjustments. Vise-like grip. Ideal for pipe and tubing work. Quality chrome plate.

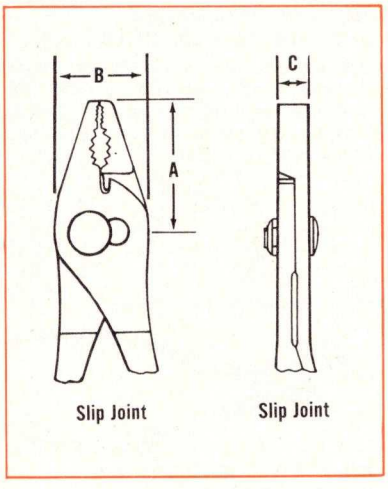
238	7 11/32"	.58	1 1/8"	2 3/16"	13/32"

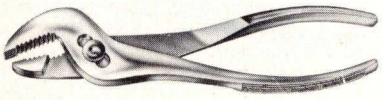
SPARE BOLT AND NUT NO. 257-BN

See page 112 for spare parts listing.

PLIERS

Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)
(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.).



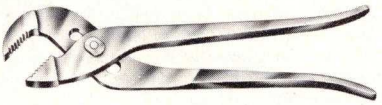


NO. 239 WRENCH PLIERS

A popular type, with long slim 20° offset nose and three jaw-opening adjustments. Jaws hold objects in front of center, insuring a powerful gripping action. Quality chrome plated.

NO.	LENGTH	WT., LBS.	A	B	C
239	7⅞"	.56	1⅝₂"	2¹⁄₁₆"	⅜"

SPARE BOLT AND NUT NO. 202-BN



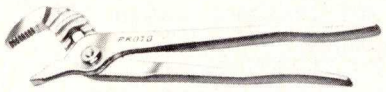
NOS. 240 & 241 GENERAL UTILITY PLIERS

All-purpose pliers, with five jaw-opening adjustments. Teeth are shaped as in a pipe wrench, insuring positive grip on round objects. Chrome plated.

NO.	TYPE DUTY	LENGTH	WT., LBS.
240	Heavy	8¹⁵⁄₁₆"	.58
241	Light	9⁹⁄₁₆"	.52

NO.	A	B	C
240	1¾₂"	1⅞"	1¹⁄₃₂"
241	1¾₂"	2"	⁹⁄₃₂"

SPARE BOLT AND NUT NOS. 240-BN & 241-B



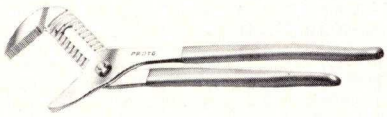
NOS. 242 & 243 POWER TRACK® PLIERS

A curved tongue-and-groove joint holds jaws securely in any desired position and takes strain off bolt. (No. 242) 4 grooves and (No. 243) 5 grooves provide wide opening range for handling hundreds of jobs. Quality chrome plated.

NO.	LENGTH	WT., LBS.	A	B	C
242	7⅝"	.44	3¹⁄₃₂"	1²⁵⁄₃₂"	2⁹⁄₆₄"
242G	7⅝"	.44	3¹⁄₃₂"	1²⁵⁄₃₂"	2⁹⁄₆₄"
243	9¹⁵⁄₁₆"	.74	1¾₆"	2⁵⁄₃₂"	2⁹⁄₆₄"
243G	9¹⁵⁄₁₆"	.74	1¾₆"	2⁵⁄₃₂"	2⁹⁄₆₄"

SPARE BOLT AND NUT NO. 243-BN

G-With Plastisol dipped handles

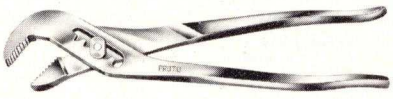


NO. 244 POWER TRACK® PLIERS

For instant action and effortless handling of big grabs — up to 4¼ O.D. . . . round, square, hex, octagon. Used where pipe wrenches won't work. Wide broached teeth for greater gripping area . . . and a non-slip sure bite. Forged tongue-and-groove joints are curved to hold jaws securely in any position and take strain off bolt. Proto "Handeze" Plastisol Grips. Induction-hardened teeth for long-life gripping power where it is needed most. Forged from special steel . . . full heat treated throughout . . . and chrome plated.

244	16¹⁵⁄₁₆"	2.93	2¼"	3¹¹⁄₁₆"	⁹⁄₁₆"

SPARE BOLT AND NUT NO. 244-BN

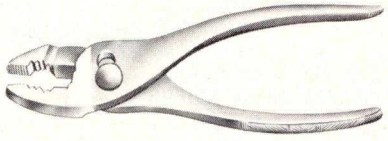


NO. 245 SELF-ENERGIZING GEAR-LOCK PLIERS

A squeeze of the handles locks bolt in gear-type slot and jaw pressure increases. No binding or slipping. Slim jaws, 1¾" opening. Sharp pipe wrench teeth and powerful no-bend cutter. A revolutionary multi-purpose tool. Quality chrome plated.

245	9⅝"	.66	1¹⁄₁₆"	2³⁄₁₆"	⁷⁄₁₆"

SPARE BOLT AND NUT NO. 245-BN

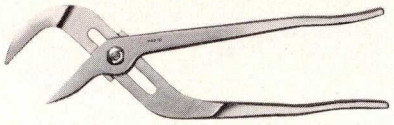


NO. 246 COMB. SLIP JOINT CUTTING PLIERS

A well-made plier that cuts most wire and nails easily. Two jaw-opening adjustments. Quality chrome plated.

246	6¹⁷⁄₃₂"	.48	1¹⁹⁄₆₄"	1¼"	⁷⁄₁₆"

SPARE BOLT AND NUT NO. 257-BN

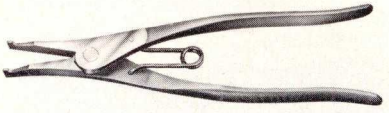


NO. 248P PIPE JAW PLIERS

Sensational plier — with a novel gear rack. Teeth 1⁄16" apart, permit 40 parallel jaw positions for securing maximum bearing surface on basin and other nuts up to 2⅞". Cam pulls sliding wedge against teeth in rack, squeezing the extra long handles creates locking action.

NO.	LENGTH	WT., LBS.	A	B	C
248P	11¾₆"	.92	1⅞"	2⅞"	⅜"

SPARE BOLT AND NUT NO. 248-SBN

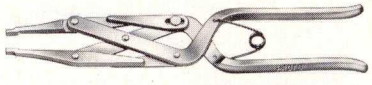


NO. 250 LOCK RING & "HORSESHOE" WASHER PLIERS

A money-saving dual-purpose plier, for spreading both soft iron "horse-shoe" lock washers used on brakes and tempered steel lock rings used on shafting to locate bearings, gears, and other parts.

250	8¾₆"	.40	2⁷⁄₆₄"	2⁷⁄₆₄"	1¾₂"

SPARE SPRING NO. 250-S

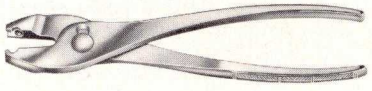


NO. 251 PARALLEL JAW LOCK RING PLIERS

Powerful compound leverage simplifies removal of lock or snap rings used on shafts to retain bearings. Jaw tip indentations hold two ends of ring, prevents breakage. Outside jaw spread 1¼". Chrome plated.

251	9½"	.54	2"	1"	⁹⁄₃₂"

SPARE SPRING NO. 251-S



NO. 252 WIRE HOSE CLAMP PLIERS WITH SLIP JOINT

Installs and removes wire spring tension clamps. New slip joint action grips full range of clamp sizes. Forged of special alloy steel. Polished and chrome plated.

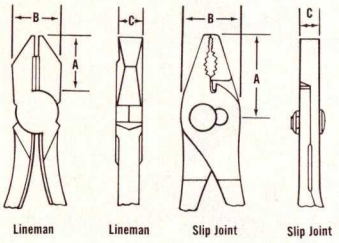
252	7¾"	.48	1¹⁄₁₆"	1¾₆"	1¾₂"

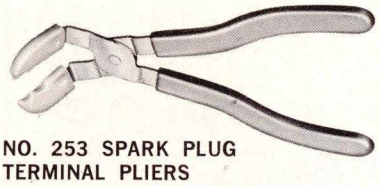
SPARE BOLT AND NUT NO. 202-BN

See page 112 for spare parts listing.

PLIERS

Federal Specs.: GGG-P-471c. (Pliers) GGG-N-350a. (Nippers and Pincers)
(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.).





NO. 253 SPARK PLUG TERMINAL PLIERS

Heavy duty, lightweight insulated plier, withstands 25,000 volts! Double protection: heavy duty nylon tip, and thick vinyl covered handles. Insulated jaws have two gripping indentations to cover wide range of wires and terminals. Angled jaws permit access to spark plug terminals in hard-to-reach locations. Heavy gauge steel construction insures long service life. Length, 7½". Wt., .21 Lb. Packaged, one per box.

SPARE NYLON TIPS NO. 253-J

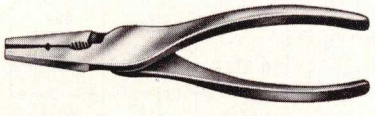
NO. 257 HEAVY-DUTY UNIVERSAL PLIERS

A curved jaw grips objects of almost any shape. Other jaw is grooved for gripping wire, etc. Has a shear-type wire cutter and two-jaw-opening adjustments. Chrome plated.

NO.	LENGTH	WT., LBS.
257	7 3/16"	.55

A	B	C	D
1 1/4"	1 5/16"	7/16"	—

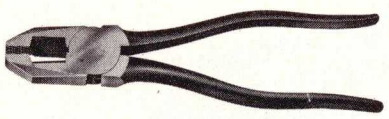
SPARE BOLT AND NUT NO. 257-BN



NO. 260 LONG THIN NOSE TELEPHONE PLIERS

Popular for telephone work, radio installation and repair. Long thin nose for tight places. Shear-type wire cutter and stripper.

NO.	LGTH.	WT., LBS.	A	B	C
260	6 11/32"	.25	1 17/32"	29/32"	11/32"



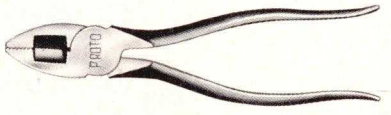
NOS. 266 AND 268 LINEMAN'S SIDE CUTTING PLIERS

For utility linemen's work, wiring and electrical equipment installation and maintenance. Carefully matched induction-hardened cutting edges. Useful around filling stations, garages. Built-in insulation crusher. High quality alloy steel.

NO.	LENGTH	WT., LBS.
266	6 7/16"	.40
266G	6 7/16"	.45
268	8 9/16"	.81
268G	8 9/16"	.86

NO.	A	B	C	D
266	1 3/32"	2 9/32"	1/2"	9/16"
266G	1 3/32"	2 9/32"	1/2"	9/16"
268	1 7/16"	1 15/64"	5/8"	1 1/16"
268G	1 7/16"	1 15/64"	5/8"	1 1/16"

G-With Plastisol dipped handles

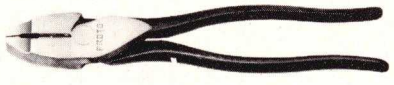


NO. 267 LINEMAN'S PLIERS— NEW ENGLAND STYLE

Heavy-duty type, powerful cutters. Slim-nosed for greater accessibility to restricted spaces. Induction hardened, built-in insulation crusher, fitted grip. Quality alloy steel.

NO.	LENGTH	WT., LBS.
267	7 1/4"	.62

A	B	C	D
1 5/16"	1 1/8"	1/2"	9/16"

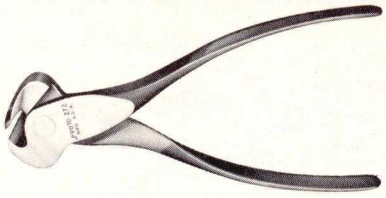


NO. 269 HIGH LEVERAGE LINEMAN'S PLIERS—NEW ENGLAND STYLE

Invaluable for cutting No. 8 and other large wires now used for electric stoves, water heaters, air conditioners, and driers. High quality alloy steel, heat treated for overall uniformity, with cutting edges induction hardened and hand filed for perfect match. All working parts accurately machined. Built-in insulation crusher. Lubricated joint with alloy heat-treated rivet assures smooth action. Rivet offset for increased leverage—up to 50% more than standard 8 inch plier.

NO.	LENGTH	WT., LBS.
269	9 3/16"	.94

A	B	C	D
1 19/32"	1 5/16"	5/8"	23/32"



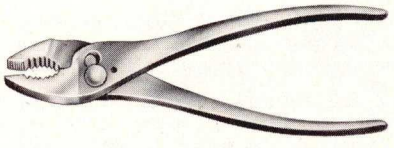
NO. 272 END NIPPERS

A tool of many uses; to cut wire and thin sheet metal by professional mechanics, electricians, plumbers and sheet metal workers. Manufactured of hot forged alloy steel.

NO.	LENGTH	WT., LBS.
272	7 7/32"	.56
272G	7 7/32"	.56

A	B	C	D
5/16"	1 11/16"	33/64"	1 3/16"

G-With Plastisol dipped handles

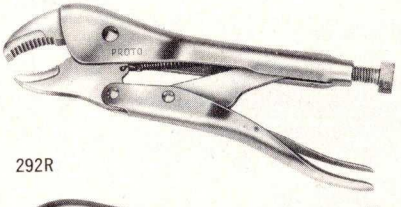


NOS. 275 - 276 - 278 - 280 SLIP JOINT PLIERS

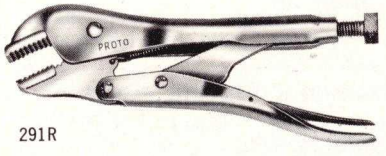
Recommended for general utility, design and service. Have two jaw-opening adjustments and a shear-type wire cutter. Four sizes. Chrome plated.

NO.	LENGTH	WT., LBS.	A	B	C
275	5 13/32"	.26	7/8"	1 1/16"	1 1/32"
276	6 3/8"	.38	1 9/64"	1 1/8"	1 3/32"
278	8 1/32"	.50	1 15/32"	1 3/16"	1 3/32"
280	10"	.88	1 3/4"	1 7/16"	1/2"

NO.	SPARE BOLT & NUT NO.
275	240-BN
276	202-BN
278	202-BN
280	280-BN



292R



291R

NO. 291R AND 292R LEVER-WRENCH PLIERS WITH QUICK RELEASE

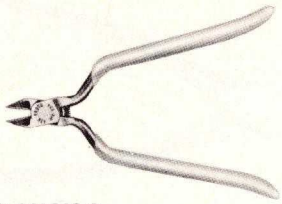
Four tools in one—a powerful handvise, clamp, pipe wrench and plier. Lever action locks jaws in holding position, with one-handed pressure up to one ton. Quick release removes pressure instantly.

NO.	LENGTH	WT., LBS.
291R	8"	1.02
292R	10"	1.20
*291	8"	.95

*Without quick release

See page 112 for spare parts listing.

TUR-QUOIS® PLIERS



TUR-QUOIS®

The TUR-QUOIS line of precision pliers is the result of four and one-half years of engineering research. It is engineered to conform to operator comfort for maximum efficiency established by "on the job" testing.

All tools equipped with replaceable coil springs . . . low-drag action for minimum hand tension, yet positive opening for less fatigue on repetitive operations.

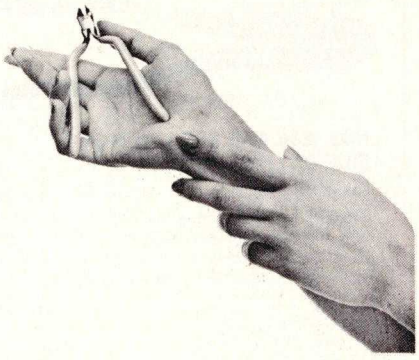
All tools have unique hot-forged pivotal rivet internally staked on one side . . . for exceptionally smooth functioning joint, precise blade alignment, extended tool life.

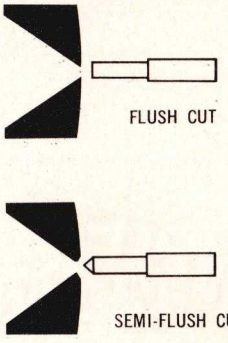
Hand comfort, color appeal and in-use studies under varying conditions guided the application engineers in making critical design decisions.

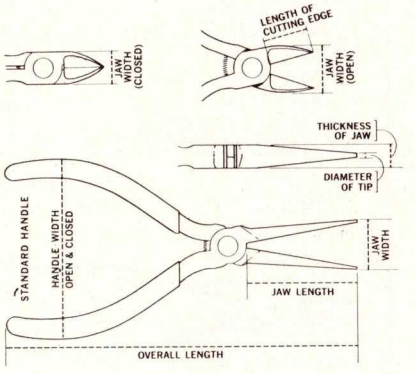
All tools drop forged from high carbon alloy steel. All non-cutting surfaces buffed and polished. All tools individually packaged with protective wrapping insert. All handles cushioned with dipped turquoise plastic grip.

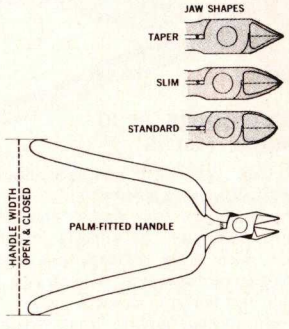
PALM-FITTED HANDLE

Palm-fitted handle spreads contact, equalizes pressure, lessens focal point fatique. High-and-wide shoulder permits "free" use of working fingers.









CUTTING PLIERS

PLIER NUMBER	450	451	452	453	454*	455*	456*	457*	458	459	460	461	462	495
JAW SHAPE	STD	STD	TAPER	TAPER	STD	STD	TAPER	TAPER	SLIM	SLIM	SLIM	SLIM	TRANS. END	END NIPPER
JAW WIDTH OPEN	9/16	9/16	9/16	9/16	9/16	9/16	9/16	9/16	3/4	13/16	13/16	1	1 23/64	13/16
JAW LENGTH	15/32	15/32	15/32	15/32	15/32	15/32	15/32	15/32	23/32	3/4	3/4	27/32	1 3/8	5/16
CUTTING EDGE LENGTH	15/32	7/32	15/32	7/32	15/32	7/32	15/32	7/32	23/32	3/4	15/32	27/32	5/32	33/64
TYPE OF CUT	SEMI-FLUSH	SEMI-FLUSH	FLUSH	FLUSH	SEMI-FLUSH	SEMI-FLUSH	FLUSH	FLUSH	SEMI-FLUSH	SEMI-FLUSH	SEMI-FLUSH	SEMI-FLUSH	SEMI-FLUSH	SEMI-FLUSH
JAW WIDTH CLOSED	7/16	7/16	7/16	7/16	7/16	7/16	7/16	7/16	9/16	5/8	5/8	25/32	11/16	15/32
JAW THICKNESS	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1 1/32	3/8	3/8	15/32	3/8	9/32
HANDLE WIDTH CLOSED	1 7/8	1 7/8	1 7/8	1 7/8	2	2	2	2	2	2	2	2	2	1 7/8
HANDLE WIDTH OPEN	2 3/4	2 3/4	2 3/4	2 3/4	3 1/4	3 1/4	3 1/4	3 1/4	3	3 1/4	3 1/4	3 3/8	3	2 7/8
OVER-ALL LENGTH	4 1/8	4 1/8	4 1/8	4 1/8	5	5	5	5	4 21/32	5 1/8	5 1/8	6 1/8	6 1/8	4 1/16
WEIGHT, LBS.	.10	.10	.10	.10	.11	.11	.11	.11	.17	.21	.22	.35	.16	.11

Indicates palm fitted handle. All others conventional handle.

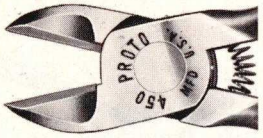
GRIPPING & BENDING PLIERS

PLIER NUMBER	470	471	472	473	475*	476*	477*	478*	480	481	482
JAW SHAPE	CHAIN	ROUND	FLAT	NEEDLE	CHAIN	ROUND	FLAT	LONG NEEDLE	NEEDLE	LONG NEEDLE	CURVED NEEDLE
JAW LENGTH	1 1/8	13/16	1 1/8	1 3/4	1 1/8	13/16	1 1/8	2 1/4	2 3/32	2 1/4	2 3/32
JAW TIP DIA.	1/32 x 1/16	3/64 x 3/32	3/64 x 5/32	3/64 x 1/16	1/32 x 1/16	3/64 x 3/32	3/64 x 5/32	1/16 x 3/32	3/32 x 3/32	1/16 x 3/32	3/32 x 3/32
JAW WIDTH CLOSED	7/16	27/64	7/16	15/32	7/16	7/16	7/16	15/32	11/16	15/32	11/16
JAW THICKNESS	1/4	1/4	1/4	5/16	1/4	1/4	1/4	5/16	3/8	5/16	3/8
HANDLE WIDTH CLOSED	1 7/8	1 7/8	1 7/8	2	2	2	2	2	2	2	2
OVER-ALL LENGTH	4 13/16	4 1/2	4 13/16	5 9/16	5 21/32	5 11/32	5 21/32	6 3/4	6 27/32	6 1/16	6
WEIGHT, LBS.	.12	.10	.11	.16	.14	.14	.16	.18	.30	.13	.28

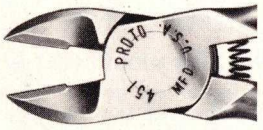
Indicates palm fitted handle. All others conventional handle.

TUR-QUOIS® PLIERS

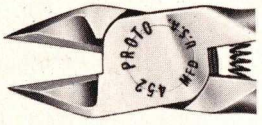
CONVENTIONAL HANDLES



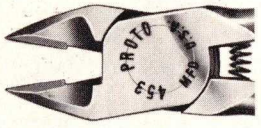
MODEL 450
Length—4", standard jaw, full cutting edge, semi-flush cut.



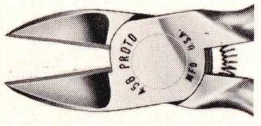
MODEL 451
Length—4", standard jaw, partial cutting edge, semi-flush cut.



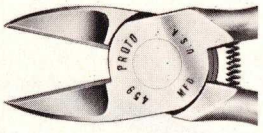
MODEL 452
Length—4", taper jaw, full cutting edge, flush cut.



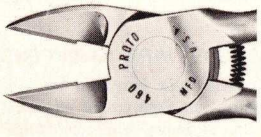
MODEL 453
Length—4", taper jaw, partial cutting edge, flush cut.



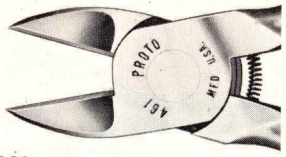
MODEL 458
Length—4½", slim jaw, full cutting edge, semi-flush cut.



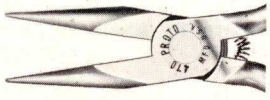
MODEL 459
Length—5", slim jaw, full cutting edge, semi-flush cut.



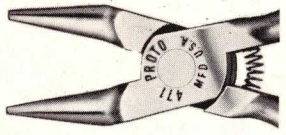
MODEL 460
Length—5", slim jaw, partial cutting edge, semi-flush cut.



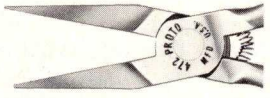
MODEL 461
Length—6", slim jaw, full cutting edge, semi-flush cut.



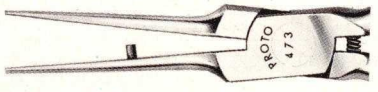
MODEL 470
Length — 4¾", chain nose. No serrations, radius edges.



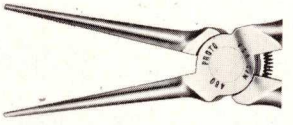
MODEL 471
Length — 4½", round nose. Full polished, tapered round nose.



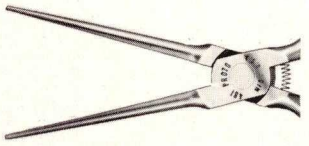
MODEL 472
Length — 4¾", flat nose. No serrations, radius edges.



MODEL 473
Length — 5⁵⁄₁₆", needle nose, with serrations, radius edges.

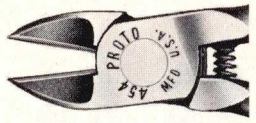


MODEL 480
Length—6¾", needle nose, with serrations, radius edges.

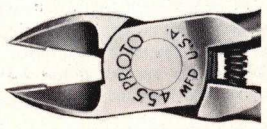


MODEL 481
Length—6", needle nose, no serrations. radius edges.

PALM FITTED HANDLES

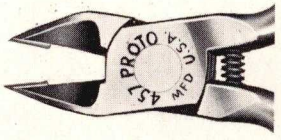


MODEL 454
Length—5", standard jaw, full cutting edge, semi-flush cut.

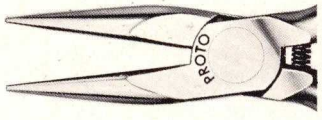


MODEL 455
Length—5", standard jaw, partial cutting edge, semi-flush cut.

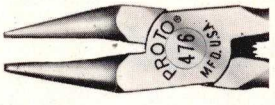
MODEL 456
Length—5", taper jaw, full cutting edge, flush cut.



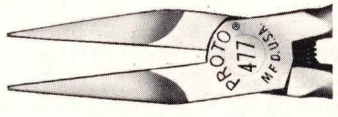
MODEL 457
Length—5", taper jaw, partial cutting edge, flush cut.



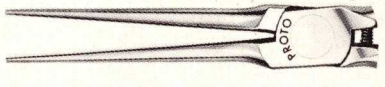
MODEL 475
Length — 5²¹⁄₃₂", chain nose. No serrations, radius edges.



MODEL 476
Length—5¹¹⁄₃₂", tapered round nose.



MODEL 477
Length — 5²¹⁄₃₂", flat nose. No serrations, radius edges.



MODEL 478
Length — 6¾", long needle. No serrations, radius edges.

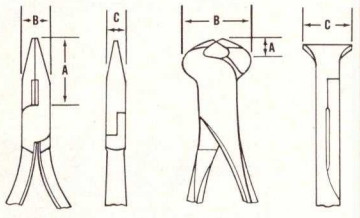
MIDGET ELECTRONIC PLIERS

Federal Specs.: GGG-P-471c. (Pliers)
GGG-N-350a. (Nippers and Pincers)
(For identification of individual tools see "Proto Conversion to Federal stock No's." Bulletin No. 5918.).

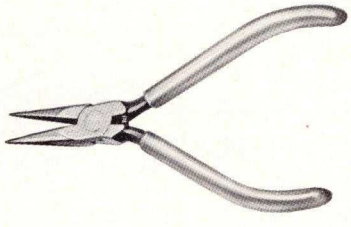
MIDGET ELECTRONIC PLIERS

These matched pliers, designed for television and radio service men, electronics and communications technicians, automotive and aviation mechanics, hobbyists and many others, speed precision work on small objects in tight places. Comfortable, wide-opening handles provide high leverage, fit snugly into the hand, and have good "feel."

B—Indicates Parco-Lubrite finish.
G—Indicates "Handeze" plastic grips.
S—Indicates coil spring.



Chain Nose Nipper



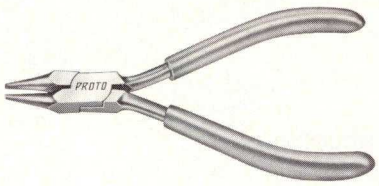
NOS. 282B, 282BSG, 282G MIDGET CHAIN NOSE PLIERS

Narrow tapered jaws with flat inside surfaces hold, bend and pull in close quarters. Coil spring adds extra speed to precision work.

NO.	LENGTH	WT., LBS.
282B	4 13/16"	.10
282BSG	4 13/16"	.13
282G	4 13/16"	.11

NO.	A	B	C	E
282B	1 1/8"	7/16"	1/4"	1/16"
282BSG	1 1/8"	7/16"	1/4"	1/16"
282G	1 1/8"	7/16"	1/4"	1/16"

SPRING NO. 285S-S

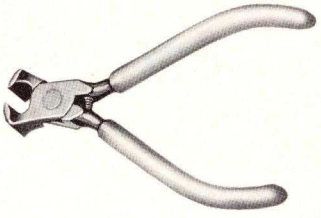


NO. 283G MIDGET ROUND NOSE PLIERS

Both jaws are rounded with a small surface and form very accurate rings, loops and bends on soft wire.

NO.	LENGTH	WT., LBS.
283G	4 1/2"	.11

A	B	C	D
13/16"	27/64"	17/64"	3/32"



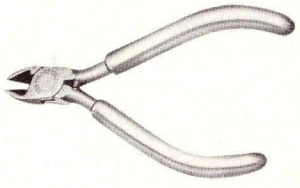
NO. 284BSG MIDGET END CUTTING NIPPERS

Has necessary leverage and sharp, induction-hardened edges for cutting small wires, connectors, bolts, rivets, etc., close to the surface. Coil spring speeds work. Quality alloy steel.

NO.	LENGTH	WT., LBS.
284BSG	4 1/16"	.11

A	B	C	D
5/16"	39/64"	9/32"	33/64"

SPRING NO. 285S-S



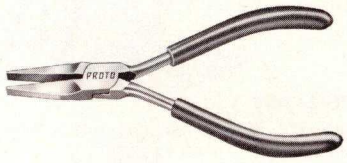
NOS. 285B, 285BSG, 285G MIDGET DIAGONAL CUTTING PLIERS

Sharp, induction-hardened edges easily cut all types of small wire, coils, etc. Narrow jaws get into tight places.

NO.	LENGTH	WT., LBS.
285B	4 1/8"	.08
285BSG	4 1/8"	.09
285G	4 1/8"	.09

NO.	A	B	C	D
285B	15/32"	27/64"	15/64"	7/32"
285BSG	15/32"	27/64"	15/64"	7/32"
285G	15/32"	27/64"	15/64"	15/32"

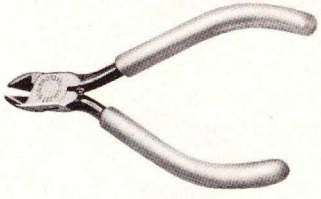
SPRING NO. 285S-S



NO. 286G MIDGET FLAT NOSE PLIERS

Flat narrow jaws get into restricted areas, provide good grip for holding and bending flat stock.

NO.	LENGTH	WT., LBS.	A	B	C
286G	4 13/16"	.10	1 1/8"	7/16"	1/4"



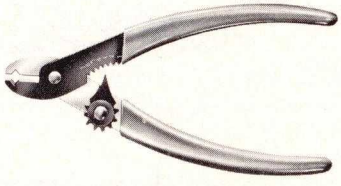
NO. 287B, 287BSG, 287G, MIDGET FLUSH CUTTING DIAGONAL PLIERS

Light rugged plier has streamlined jaws for greater access to, and quick flush cutting in confined areas.

NO.	LENGTH	WT., LBS.
287B	4 1/8"	.08
287BSG	4 1/8"	.09
287G	4 1/8"	.09

NO.	A	B	C
287B	15/32"	27/64"	15/64"
287BSG	15/32"	27/64"	15/64"
287G	15/32"	13/32"	15/64"

SPRING NO. 285S-S



NO. 299 WIRE STRIPPERS

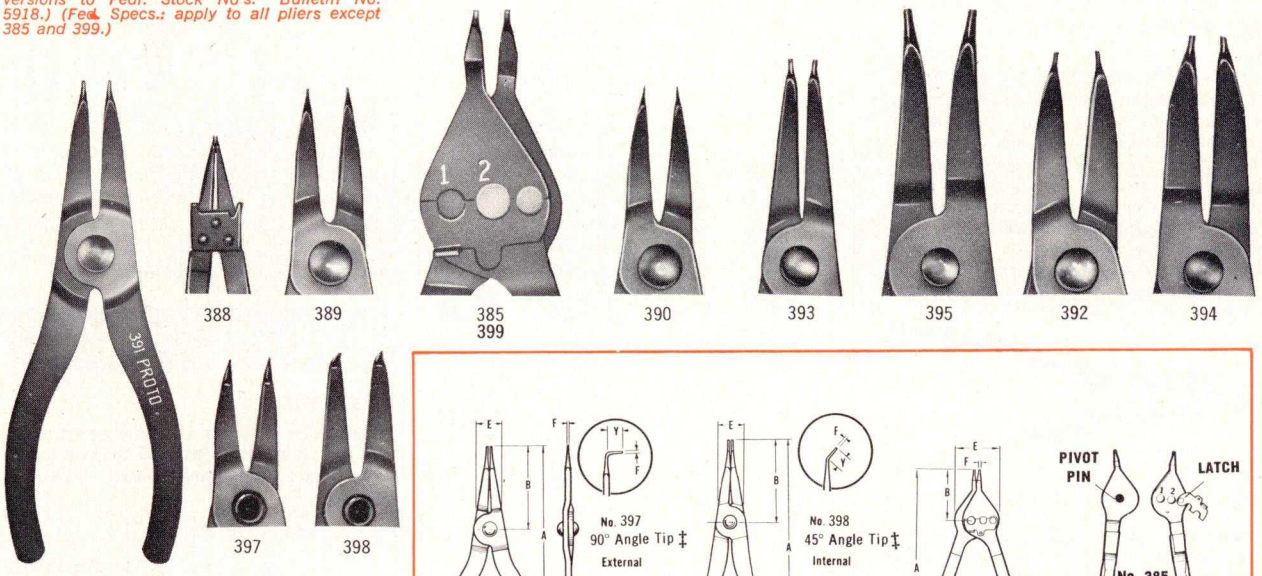
V notches nick insulation for clean, fast stripping of wire. Face ground edges cut soft wire up to No. 14 gauge. With comfortable plastic grips.

NO.	LENGTH	WT., LBS.
299	5"	.12

See page 112 for spare parts listing.

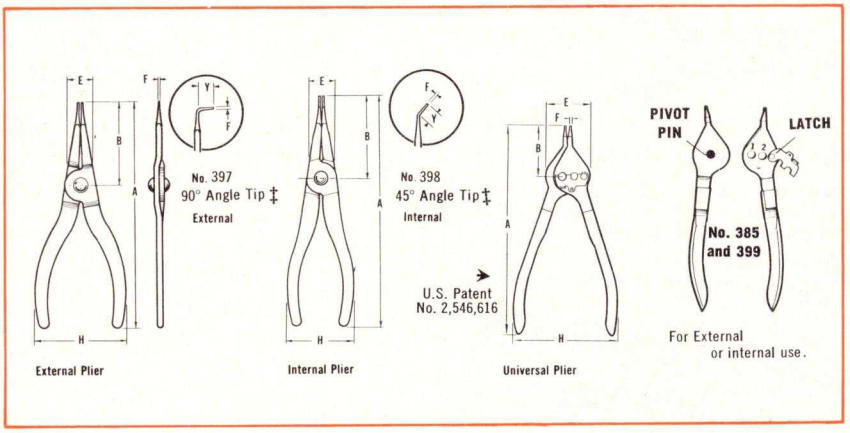
TRUARC® RETAINING RING PLIERS

Federal Specs.: GGG-P-480a. (See "Proto Conversions to Fedl. Stock No's." Bulletin No. 5918.) (Fed. Specs.: apply to all pliers except 385 and 399.)



PROTO TRUARC®* RETAINING RING PLIERS

12 Proto models handle rings on shafts up to 4" and bores 1/4" to 7" dia. with correct plier sizes to hold firmer, prevent ring damage, reduce danger from flying rings. Permanent can't-lose tips are precision ground, induction hardened, correctly angled, insuring faster, trouble-free work.



If Truarc ring numbers are known, the right plier may be ordered by referring to this table. EXAMPLE: For External rings 5100-18 thru 5100-23, the correct plier is No. 388.

	EXTERNAL							INTERNAL					
TRUARC RING TYPES	SERIES 5100 5101 5102		SERIES 5108					SERIES N 5000 N 5001 N 5002		SERIES 5008			
Series Dash No.	-18 ↓ -23	-25 ↓ -87	-93 ↓ -143	-150 ↓ -350	-50 ↓ -100	-106 ↓ -200	-215 ↓ -334	-37 ↓ -102	-106 ↓ -175	-181 ↓ -300	-75 ↓ -137	-143 ↓ -200	-206 ↓ -300
Pliers No.	388	391 397 399	393 385	395	391 397 399	393 385	395	389 398 399	392 385	394	389 398 399	392 385	394

Note: Series dash numbers are in hundredths of inches. Thus, 5100-25 identifies External ring series 5100 for a shaft of approximately 0.25" O.D.

Other types and sizes of pliers can be obtained upon special request.

To obtain the right plier, simply measure the diameter of the shaft or bore where the ring is found, and refer to this table.

	PLIER NO.	SHAFT DIAM. RANGE	BORE DIAM. RANGE	A	(TOL.)	B	(TOL.)	E ▪	(TOL.)	F	(TOL.)	H ▪	"(TOL.)	WT., LBS.
EXTERNAL	†388	3/16" - 15/64"		5 5/16		1 1/8	±1/16	1/2	±1/16	.023	±.003	1 1/2	±1/8	.05
	391	1/4" - 1"		5 11/16		2 1/8		7/8		.038		2 5/16		.16
	393	15/16" - 2"		6 13/16	±1/8	2 3/8	±1/8	7/8	±1/8	.070	+.002	2 5/8	±1/4	.20
	395	1 1/2" - 3 1/2"		9 1/8		3		1 1/8		.115	—.005	4		.50
	*397	1/4" - 1"		5 7/16		1 7/8		7/8		.038		2 5/16		.16
INTERNAL	389		3/8" - 1 3/8"	5 7/16		1 7/8		1 3/16		.038	+.002 —.003	1 11/16		.14
	390		1/4" - 5/16"	5 7/16		1 7/8		1 3/16		.022		1 11/16		.14
	392		1 1/16" - 2"	6 9/16	±1/8	2 1/8	±1/8	7/8	±1/8	.070	+.002 —.005	2	±1/4	.21
	394		1 13/16" - 3"	8 7/8		2 11/16		1 1/8		.090		2 5/8		.46
	**398		3/8" - 1 3/8"	5 1/4	±1/8	1 11/16	±1/8	1 3/16		.038	+.002 —.005	1 11/16	±1/4	.14
UNIV.	385	15/16" - 1 7/16"	1 1/16" - 2"	7 7/8	±1/4	1 7/8	±1/8	1 7/16 1 11/16	±1/8	.070	+.002 —.003	3 15/16 3 5/16	±1/4	.38
	399	1/4" - 7/8"	3/8" - 15/16"	5 3/4"	±1/4	1 5/8"	±1/8	1 3/16 1 3/8	±1/8	.038	+.002 —.003	1 11/16 2 3/8	±1/4	.17

*†U.S. Patent No. 2,901,817. ‡Y—max. 5/16, min. 1/4 *90° angle tip. **45° angle tip. ▪ For Universal pliers, dimensions are for: External position - Internal position.*

**Registered Trademark of Waldes-Kohinoor Inc., Long Island, N.Y.*

ALL PURPOSE SNIPS / HACKSAWS
HACKSAW BLADES / HOLESAWS

PROTO PROFESSIONAL TOOLS

Federal Specs.: GGG-S-291d.

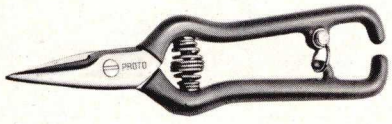
ALL-PURPOSE SNIPS

Twelve styles and sizes fill needs of industries, mechanics, craftsmen, farmers and home owners. They cut steel, tin, sheet metals, wire, linoleum, canvas, gaskets, roofing, rubber, twine, leather, cardboard, shrubs, flowers and hundreds of other items. Scientifically designed, they give smooth, fast, accurate cuts. Blades of special steel are hot drop forged for great strength and toughness. Electrically controlled heat treating and tempering give the blades in each snip the same hardness, essential for proper operation and long life.

NOS. 303L, 303R AND 303S

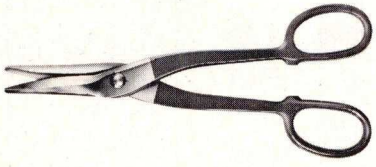
Aviation type straight cut, left cut and right cut multiple-leverage — for intricate cutting. Compound action greatly increases power.

303L red plastisol handle, 303R green plastisol handle, 303S yellow plastisol handle



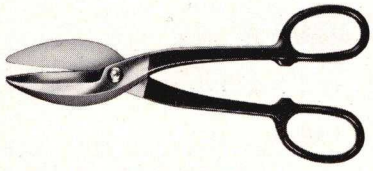
NO. 306

An excellent shear for light electronic assembly work. Lightweight. Gets into those "tight areas." Snip wires easily, built-in spring snaps blades back for next snip—while it rests comfortably in the palm! Recommended for cutting gasket material, tin plate, copper, bronze, shimstock, light piano wire and cold rolled sheet steel up to .025" thick.



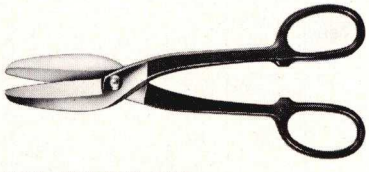
NOS. 307, 310 AND 312

Duckbill or circular snips—for cutting circles and other odd designs. Blades hollow ground for better work.



NOS. 317, 320 AND 322

Straight or regular snips—handy for shops, farms, homes. Streamlined with graceful curves, rounded edges.



NOS. 330 AND 332

Combination snips—for straight and moderately irregular cuts.

SNIPS

NO.	DESCRIPTION
303L	Multi-Leverage, Left Cut
303R	Multi-Leverage, Right Cut
303S	Multi-Levrg., Straight Cut
306	Longnose Metal Shears
307	Duckbill or Circular
310	Duckbill or Circular
312	Duckbill or Circular
317	Straight or Regular
320	Straight or Regular
322	Straight or Regular
330	Combination Pattern
332	Combination Pattern

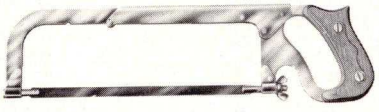
NO.	OVERALL LENGTH	LENGTH OF CUT	WT., LBS.
303L	10"	1⅜"	1.00
303R	10"	1⅜"	1.00
303S	10"	1⅜"	1.00
306	6½"	1½"	.25
307	7"	2"	.50
310	10"	2¼"	1.00
312	12¾"	3"	1.58
317	7"	2"	.50
320	10"	2¼"	1.00
322	12¾"	3"	1.58
330	10"	2½"	1.00
332	12½"	3"	1.63

HACKSAWS

Fedl. Specs.: GGG-F-671b

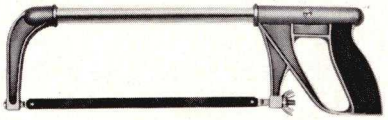
NO. 345 LOW CLEARANCE HACKSAW

For use when a high frame interferes with work. Handle is die cast metal with red baked enamel finish, shaped to fit the hand. Takes 10" blades. Weight. 1 Lb.



NO. 352 ADJUSTABLE HACKSAW

A heavy-duty polished and plated frame with many fine features. Pistol-grip handle, of durable red plastic, is at an angle and shaped to fit the hand. Takes 8", 10" or 12" blades, which can be set in four different positions. Weight, 1.72 Lbs.



NO. 353 TUBULAR HACKSAW

Strong, rigid steel tube backbone has positive-hold settings for 10" and 12" blades. Sturdy alloy metal frames are finished in red, with black plastic pistol grip. Weight 1.08 Lbs.

HAND HACKSAW BLADES

PROTO-FLEX Ⓣ*

Heat-treated Molybdenum alloy steel . . . unbreakable in use. Tempered for toughest cutting where breakage is a problem. Finest professional quality for cutting everything from soft metals to high alloy steels.

BLADES

NO.	LENGTH	WIDTH	THICKNESS	TEETH PER IN.	WEIGHT PER PKG.
HB1018F	10	½	.025	18	.35
HB1024F	10	½	.025	24	.37
HB1218F	12	½	.025	18	.41
HB1224F	12	½	.025	24	.43
HB1232F	12	½	.025	32	.46

**Packed in Ten's. Color coding makes identification of blades fast and efficient.*

PROTO-TUF Ⓣ*

Patented alloy steel. Heat-treated to great toughness and yet maximum hardness. Stripless teeth . . . even on lightest tubing, thinnest sheet materials.

NO.	LENGTH	WIDTH	THICKNESS	TEETH PER IN.	WEIGHT PER PKG.
HB1018T	10	½	.025	18	.35
HB1024T	10	½	.025	24	.37
HB1218T	12	½	.025	18	.41
HB1224T	12	½	.025	24	.43
HB1232T	12	½	.025	32	.46

**Packed in Ten's. Color coding makes identification of blades fast and efficient.*

HOLE SAWS

PROTO-MOL Ⓣ

High-speed Molybdenum steel provides tremendous cutting ability in any machinable material . . . metal, wood, plastic, plaster. Through all obstructions such as screws, nails, metal lath, etc. Follow-through design for cutting successive pieces to any depth in stacked material. Knock-out holes permit easy core removal. Diameter size range from ¾" to 2½" dia. holes . . . depth 1⅛". Standard mandrels for ¾" to 1½" dia. Quick change mandrel for 1¼" to 2½" dia.

HOLE SAWS			MANDRELS		
NO.	DIAMETER SAW	WT. EA. POUNDS	NO.	SHANK INCH	WT. EA. POUNDS
HS24M	¾"	.06			
HS28M	⅞	.09	HSM2436M	7/16 Hex	.17
HS32M	1	.12			
HS36M	1⅛	.15			
HS40M	1¼	.17			
HS44M	1⅜	.19	HSM4048M	7/16 Hex	.26
HS48M	1½	.22			
HS52M	1⅝	.25			
HS56M	1¾	.30			
HS64M	2	.39	HSM5280M	7/16 Hex	.47
HS80M	2½	.31			
(Replacement drill for all above Mandrels) HSM8D — .03					

C-CLAMPS / ADJUSTABLE WRENCHES

Federal Spec.: GGG-C-406a. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PROTO-QUIK®

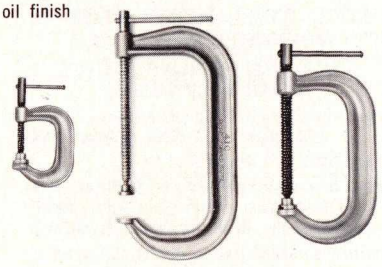
Holes ¾" to 2½" dia. x ⅞" deep . . . special alloy steel cuts soft metal, wood, plastic, plaster . . . through obstructions such as screws, nails, metal lath, etc. Follow-through design permits deeper hole-cutting by removing cores as cutting progresses. Standard mandrel.

HOLE SAWS			MANDRELS		
NO.	DIAMETER SAW	WT. EA. POUNDS	NO.	INCH SHANK	WT. EA. POUNDS
HS24K	¾	.03			
HS28K	⅞	.03			
HS32K	1	.05	HSM2436K	¼ Rd.	.09
HS36K	1⅛	.06			
HS40K	1¼	.06			
HS44K	1⅜	.07			
HS48K	1½	.07			
HS52K	1⅝	.08	HSM4080K	5/16 Rd.	.14
HS56K	1¾	.09			
HS64K	2	.11			
HS80K	2½	.16			

C-CLAMPS

Federal Spec. GGG-C-406a.

Forged and scientifically heat treated from selected steel. Extra heavy threads increase spindle strength under pressure. Adjustable handle. Light oil finish

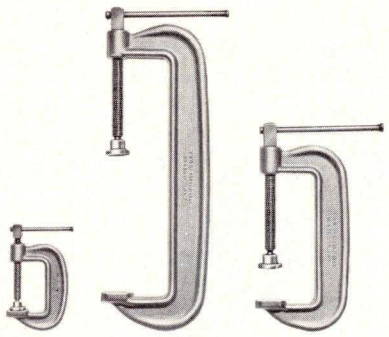


REGULAR DUTY C-CLAMPS WITH PERMA-PAD

Deep Throat

NO.	CAPACITY	THROAT DEPTH*	SPINDLE DIAMETER	WT., LBS. EACH
402	0" - 2"	2"	½"	1.16
†402S	0" - 2"	2"	½"	1.16
403	0" - 3"	2½"	⅝"	1.80
†403S	0" - 3"	2½"	⅝"	1.80
404	0" - 4"	2⅞"	¾"	2.90
†404S	0" - 4"	2⅞"	¾"	2.90
406	0" - 6"	3⅝"	¾"	4.35
†406S	0" - 6"	3⅝"	¾"	4.35
408	2" - 8"	4½"	¾"	5.65
†408S	2" - 8"	4½"	¾"	5.65
410	2" - 10"	5⅜"	¾"	8.60
†410S	2" - 10"	5⅜"	¾"	8.60
412	2" - 12"	5¾"	⅞"	12.00
†412S	2" - 12"	5¾"	⅞"	12.00

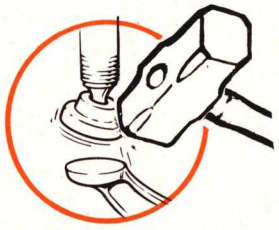
†SPATTER-RESISTANT—CADMIUM PLATED. For use in welding operations.
**From center of screw.*



GENERAL SERVICE C-CLAMPS WITH PERMA-PAD

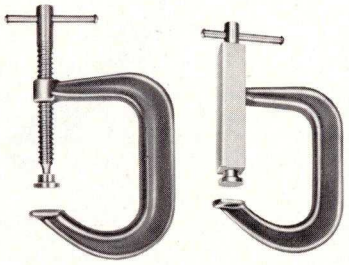
NO.	CAPACITY	THROAT DEPTH*	SPINDLE DIAMETER	WT., LBS. EACH
102GS	0" - 2"	1½"	9/16"	1.42
103GS	0" - 3"	2"	⅝"	2.80
104GS	0" - 4"	2⅜"	¾"	4.14
106GS	2" - 6"	2½"	¾"	5.30
108GS	4" - 8"	2⅝"	¾"	6.50
110GS	6" - 10"	2¾"	¾"	7.66
112GS	8" - 12"	2⅞"	¾"	9.56

**From center of screw.*



PROTO PERMA-PAD*

This pad was battered twenty times with a 5 lb. sledge. Scarred, but still usable . . . the pad still retains free motion through a 60° arc!



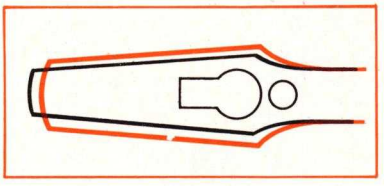
424 424S

EXTRA DEEP THROAT C-CLAMPS

NO.	CAPACITY	THROAT DEPTH	SCREW DIAMETER	WT., LBS. EACH
424	0" - 4"	4"	¾"	4.60
†424S	0" - 4"	4"	¾"	4.56
426	0" - 6"	5"	¾"	6.10
†426S	0" - 6"	5"	¾"	6.62
428	2" - 8"	6"	¾"	8.50
†428S	2" - 8"	6"	¾"	9.96

†SPATTER-RESISTANT—CADMIUM PLATED. For use in welding operations.
**Registered Trademark Wilton Tool Manufacturing Co., Sheller Park, Del.*

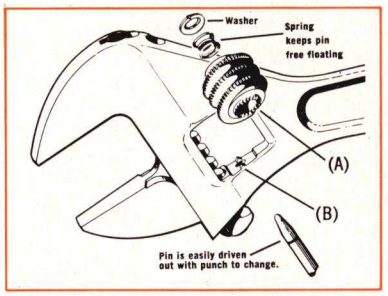
CLIK-STOP® ADJUSTABLE WRENCHES



Proto's thin head gets into tighter places.

THE CLIK-STOP® LOCKS AUTOMATICALLY

It stays locked, exactly where you set it. Pressure on the handle keeps it locked, automatically. When you lay the CLIK-STOP® down its opening size doesn't change. You don't have to keep resetting it every time you go back to the same size fitting. Yet when there's no pressure on the handle CLIK-STOP'S® golden knurl turns easily to any exact opening size. There are no buttons or gadgets to push. The harder you pull, the tighter it locks, automatically. That's why CLIK-STOP® is the safest to use, protects you from skinned knuckles and serious accidents. Chrome or Black Industrial finish.



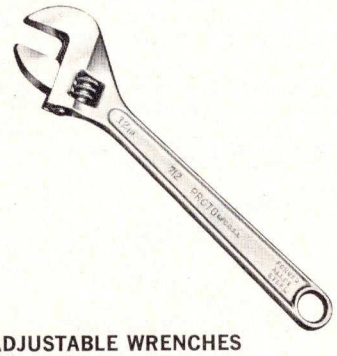
PROTO LOCKING FEATURE

Grooves (A) in spring-loaded knurl mesh with teeth (B) in wrench body to hold exact jaw openings. Pressure on lower jaw, when in use, pulls down on knurl, automatically locking teeth still tighter.

NO.	LENGTH	MAXIMUM OPENING	FINISH	WT., LBS.
704L	4"	½"	Full	.10
704SL	4"	½"	Semi	.10
706L	6"	¾"	Full	.23
706SL	6"	¾"	Semi	.23
708L	8"	1"	Full	.54
708SL	8"	1"	Semi	.54
710L	10"	1⅛"	Full	.85
710SL	10"	1⅛"	Semi	.85
712L	12"	1 5/16"	Full	1.56
712SL	12"	1 5/16"	Semi	1.56
715L	15"	1 11/16"	Full	2.90
715SL	15"	1 11/16"	Semi	2.90
716L	16"	1⅞"	Full	3.70
716SL	16"	1⅞"	Semi	3.70
718L	18"	2 1/16"	Full	4.80
718SL	18"	2 1/16"	Semi	4.80
720L	20"	2½"	Full	6.30
720SL	20"	2½"	Semi	6.30

See page 112 for spare parts listing.

Federal Description: "Open end, 22½° angle, heavy-duty adjustable wrench. Specs.: GGG-W-631a, Type I



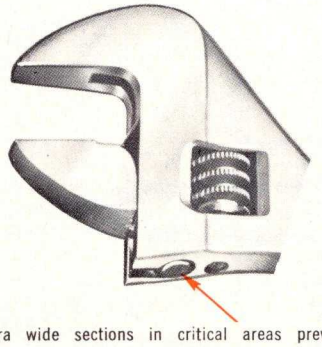
ADJUSTABLE WRENCHES 22½° ANGLE

Forged from fine alloy steel, these wrenches are strong—though thin and light to permit faster work. Seven full-finish wrenches are highly polished and then chrome plated to prevent rust and enhance appearance. The seven semi-finish wrenches have polished heads and back. Absence of a corner lip on the movable jaw (in most sizes) allows a square nut to fit flat against the inside jaw surface, resulting in greater strength and better adaptability to different size nuts. Every handle uses a husky I-beam construction and has a hole for hanging up the wrench.

NO.	NOM. LENGTH	MAXIMUM OPENING	FINISH	WT., LBS.
704	4″	½″	Full	.10
704S	4″	½″	Semi	.10
706	6″	¾″	Full	.23
706S	6″	¾″	Semi	.23
708	8″	1″	Full	.54
708S	8″	1″	Semi	.54
710	10″	1⅛″	Full	.85
710S	10″	1⅛″	Semi	.85
712	12″	1 5/16″	Full	1.56
712S	12″	1 5/16″	Semi	1.56
715	15″	1 11/16″	Full	2.90
715S	15″	1 11/16″	Semi	2.90
716	16″	1⅞″	Full	3.70
716S	16″	1⅞″	Semi	3.70
718	18″	2 1/16″	Full	4.80
718S	18″	2 1/16″	Semi	4.80
720	20″	2½″	Full	6.30
720S	20″	2½″	Semi	6.30

NOTE: For detailed description of exclusive features of this wrench and of Proto's Clik-Stop, the automatic-locking adjustable wrench, see page 17.

Adjust wrench repair kits shown on page 114.



Extra wide sections in critical areas prevent breakage.

Federal Description: "Adjustable heavy-duty pipe Wrench." Specs.: GGG-W-651b, Type II, Class A.

PIPE WRENCHES HEAVY DUTY TYPE

Rugged design, engineered for light weight and good balance. Features include heat-treated, precision milled teeth, replaceable lower jaw; pipe sizes on forged hook jaw, I-beam handle of alloy ductile iron, and alloy steel jaws.

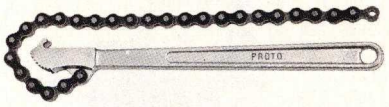
NO.	LENGTH	MAXIMUM PIPE SIZE	WT., LBS.
806HD	6″	¾″	.45
808HD	8″	1″	.85
810HD	10″	1½″	1.80
814HD	14″	2″	3.50
818HD	18″	2½″	5.80
824HD	24″	3″	9.60
836HD	36″	4″	16.00
848HD	48″	6″	29.00

Federal Description: "Normal-duty Adjustable Pipe Wrench." Specs.: GGG-W-651b, Type I, Class A.

NORMAL DUTY STILLSON-PATTERN

Strength far exceeds Government normal-duty specifications. Have forged and heat-treated special steel handle of panel I-beam type, strengthened strain points, an easy-turning knurl, and hard, tough jaw teeth that are deep-milled for positive grip.

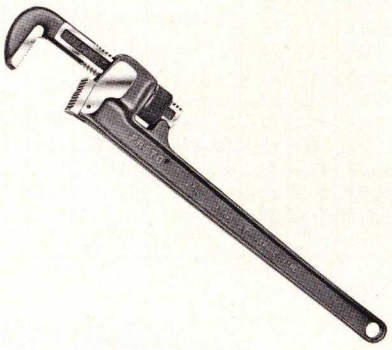
NO.	LENGTH	MAXIMUM PIPE SIZE	WT., LBS.
806	6″	½″	.32
808	8″	¾″	.65
810	10″	1″	1.38
814	14″	1½″	2.65
818	18″	2″	4.10
824	24″	2½″	7.30



NO. 801 UNIVERSAL CHAIN WRENCH

Reaches hard-to-get-at work. Handles all shapes —round, square, hexagon, octagon, as well as pipe, from ⅞″ to 4″ O.D. 12⅛″ handle is drop-forged alloy steel, nickel chrome plated. Deep, sharp broached teeth bite firmly. Chain 16¼″ long, heat treated for strength of 6200 lbs., securely attached to handle by large-headed rivet. Overall length, handle, 12″. Wt. 1.5 lbs.

Housing unconditionally guaranteed against breakage or distortion.



Federal Description: "Adjustable heavy-duty pipe Wrench." Specs.: GGG-W-651c, Type II, Class A.

FORGED STEEL HEAVY DUTY PIPE WRENCHES

EXCEEDS STANDARD HEAVY DUTY PIPE WRENCH SPECIFICATIONS

Forged steel I-beam handle and housing construction is 25% lighter — 25% stronger than regular heavy duty pipe wrenches.

Forged alloy steel hook jaw and fixed jaw. Drive lock pin holds fixed jaw in place with specially designed shoulder to insure maximum strength.

Induction hardened jaws accurately broached for slip-proof bite.

Full floating hook jaw with positive spring for faster "racheting action."

Pipe size scale and large adjusting knurl for easy adjustment.

Backed by Proto's professional guarantee.

Wrench for wrench . . . the toughest and lightest heavy duty pipe wrenches you can lay your hands on. Drop forged steel I-beam handle and housing tested to withstand tremendous side pull strain. Entire housing and handle designed to withstand 25% more loading than conventional cast iron handles.

NO.	DESCRIPTION	MAX. PIPE SIZE
814 FHD	Forged H. D. Pipe Wrench	2″
818 FHD	Forged H. D. Pipe Wrench	2½″
824 FHD	Forged H. D. Pipe Wrench	3″

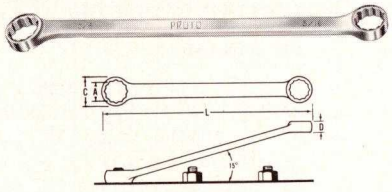
NO.	LENGTH	MAX. PIPE SIZE	WT., LBS.
814 FHD	14″	2″	2.70
818 FHD	18″	2½″	4.50
824 FHD	24″	3″	7.64

See page 113 for spare parts listing.

BOX WRENCHES

Fedl. Description: "Box Wrench, Double Head, 12-Point, 15° Offset Each End." Specs.: GGG-W-00636c, Type 1, Class 1, Style 1 (Nos. 1120L-1131L and 1134-1164) and Style 2 (Nos. 1120-1131).

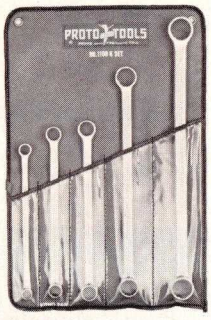
BOX WRENCHES/12-POINT



Thin but very strong box walls and resulting compact heads permit use in close quarters. Walls are thinner at the wrench tip than at the shank end of the box where greater strength is needed. Box openings are countersunk for easy placement over a nut. Streamlined shanks provide comfortable grip, reduce the weight and allow long use without fatigue. These box wrenches are forged from special alloy steels and scientifically heat treated to give the desired strength, toughness, and hardness. Accurate openings speed work, reduce wear. Chrome plating gives a bright, rust-proof finish.

NO.	NOMINAL OPENING SIZES (A)	SML. OPEN. END HEAD O.D. (C)	SML. OPEN. END HEAD THKNS. (D)	LGE. OPEN. END HEAD O.D. (C)	LGE. OPEN. END HEAD THKNS. (D)	TOTAL LENGTH (L)	WT., LBS.
1120	5/16" x 3/8"	.53"	.28"	.63"	.31"	4 1/4"	.05
1122	3/8" x 7/16"	.63"	.31"	.72"	.34"	4 5/8"	.06
1125	7/16" x 1/2"	.72"	.34"	.78"	.36"	5"	.09
1126	1/2" x 9/16"	.78"	.36"	.89"	.39"	5 3/8"	.11
1127	1/2" x 19/32"	.78"	.36"	.92"	.39"	5 9/16"	.12
1130	9/16" x 5/8"	.89"	.39"	.97"	.44"	5 3/4"	.14
1131	5/8" x 3/4"	.97"	.44"	1.13"	.50"	6 1/8"	.20
1134	5/8" x 11/16	.97"	.44"	1.06"	.47"	10 5/8"	.34
1135	11/16" x 3/4"	1.06"	.47"	1.13"	.50"	11 1/4"	.43
1137	11/16" x 25/32"	1.06"	.47"	1.19"	.50"	11 7/8"	.43
1139	3/4" x 7/8"	1.16"	.50"	1.31"	.56"	13 1/8"	.63
1140	13/16" x 7/8"	1.25"	.54"	1.31"	.56"	13 7/8"	.65
1141	7/8" x 1 1/16"	1.32"	.56"	1.58"	.61"	14 5/8"	.84
1145	15/16" x 1"	1.38"	.58"	1.50"	.60"	15 1/2"	.93
1147	15/16" x 1 1/16"	1.44"	.60"	1.63"	.60"	16 3/8"	1.08
1150	1 1/16" x 1 1/8"	1.59"	.62"	1.69"	.66"	17 1/4"	1.17
1151	1 1/16" x 1 1/4"	1.59"	.62"	1.88"	.69"	18 1/4"	1.38
1155	1 1/4" x 1 5/16"	1.88"	.71"	1.95"	.73"	19 1/4"	1.54
1160	1 1/4" x 1 3/8"	1.88"	.71"	2.05"	.74"	20 1/4"	1.82
1161	1 1/4" x 1 7/16"	1.91"	.75"	2.18"	.78"	21 1/4"	2.03
1162	1 7/16" x 1 1/2"	2.13"	.82"	2.19"	.85"	22 1/4"	2.30
1163	1 7/16" x 1 5/8"	2.20"	.85"	2.44"	.92"	23 1/4"	2.72
1164	1 5/8" x 1 11/16"	2.52"	.91"	2.58"	.97"	24 1/2"	3.14
1120L	5/16" x 3/8"	.53"	.28"	.63"	.31"	7 3/8"	.09
1122L	3/8" x 7/16"	.63"	.33"	.72"	.34"	7 5/8"	.11
1125L	7/16" x 1/2"	.72"	.34"	.80"	.36"	7 7/8"	.14
1126L	1/2" x 9/16"	.80"	.38"	.89"	.38"	8 3/8"	.18
1130L	9/16" x 5/8"	.89"	.38"	.97"	.44"	8 7/8"	.24
1131L	5/8" x 3/4"	.97"	.44"	1.13"	.50"	9 7/16"	.37

BOX WRENCH SETS



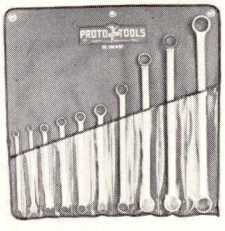
NO. 1100K SET

A fine basic set of five double-end box wrenches in the most-used range to which you can add more sizes as they are needed. All opening sizes are provided from 3/8" through 7/8" in 1/16" steps.

CONTENTS/NO. 1100K SET

NO.	OPENING SIZES	LENGTH
1122L	3/8" x 7/16"	7 5/8"
1126L	1/2" x 9/16"	8 3/8"
1130L	9/16" x 5/8"	8 7/8"
1135	11/16" x 3/4"	11 1/4"
1140	13/16" x 7/8"	13 7/8"
2405	Vinyl Kit, 10" x 15"	

Weight, 2.2 lbs.



NO. 1100M SET

This master set of ten double-end box wrenches for professional use will take care of almost all common size nuts and bolts. It includes every nominal opening size from 5/16" through 1 1/8" in 1/16" steps.

CONTENTS/NO. 1100M SET

NO.	OPENING SIZES	LENGTH
1120L	5/16" x 3/8"	7 3/8"
1122L	3/8" x 7/16"	7 5/8"
1125L	7/16" x 1/2"	7 7/8"
1126L	1/2" x 9/16"	8 3/8"
1130L	9/16" x 5/8"	8 7/8"
1131L	5/8" x 3/4"	9 7/16"
1135	11/16" x 3/4"	11 1/4"
1140	13/16" x 7/8"	13 7/8"
1145	15/16" x 1"	15 1/2"
1150	1 1/16" x 1 1/8"	17 1/4"
2418	Vinyl Kit, 18 7/8" x 18 1/2"	

Weight, 5.2 lbs.

IMPORTANT
SAFETY RULES FOR HAND TOOL USE

Hand tools, although commonly used, are specialized for particular jobs. Always use the right size and type of tool for the job being done. Keep tools in proper working condition.

"Mushroomed" heads of chisels and punches may chip and cause injury.

Screwdriver blades are made to turn screws; they should never be used for other purposes. Worn blades may slip and cause injury.

Only power drive sockets should be used on pneumatic or electric impact wrenches.

All wrenches are designed to a specific size-length-strength ratio. The use of a "cheater" or any other means for increased leverage is hazardous. Keep hammer heads tightened on handle. Do not strike one hammer with another hammer.

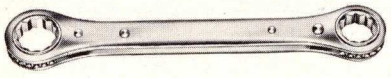
Eye protection, through use of safety glasses or hood, is recommended for any job involving the use of tools; particularly when using punches, chisels and drills.

Use hand tools only for their designed purposes and within their size range.

Proto Tool Company cannot be responsible for injury or damage caused by tools improperly used; or from tools which have been abused or badly worn.

PROTO® PROfessional TOols

See "Proto Conversion to Federal stock numbers" Bulletin No. 5918



RACHETING BOX WRENCHES

Many applications. Turning over wrench reverses direction. Laminated construction adds strength and reduces weight. Chrome plated for rust protection.

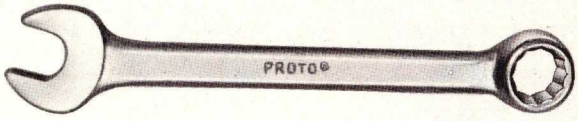
NOTE: For standard nut and bolt sizes, corresponding to nominal wrench openings, see Chart page 115.

NO.	NOMINAL OPENING SIZES	NO. OF POINTS IN BOX	SML. OPEN. END		LGE. OPEN. END		TOTAL LENGTH	WT., LBS.
			HEAD O.D.	HEAD THKNS.	HEAD O.D.	HEAD THKNS.		
1191	1/4" x 5/16"	6	.56"	.38"	.63"	.38"	4 1/4"	.13
1192	3/8" x 7/16"	6	.75"	.38"	.88"	.38"	5 1/2"	.18
1193	1/2" x 9/16"	6	1.00"	.50"	1.13"	.50"	6 3/4"	.39
1194	5/8" x 11/16"	12	1.19"	.50"	1.31"	.50"	8"	.60
1196	5/8" x 3/4"	12	1.31"	.50"	1.44"	.50"	8 1/8"	.64
1195	3/4" x 7/8"	12	1.38"	.50"	1.56"	.50"	9 1/4"	.73

Federal Description: "Combination wrench, open end and 15° offset box." Specs.: GGG-W-00636c. Type III

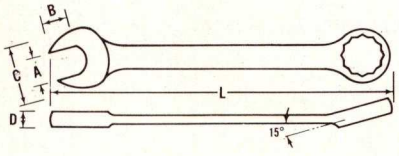
COMBINATION BOX & OPEN END AND 15° WRENCHES

See page 88 for Metric sizes.



THE TYPE FOR BOTH SPEED AND SAFETY

Same opening size on each end. Use safe box end for breaking loose a nut, turn the wrench end for end, and then use speedy open end for running off nut. Reverse procedure for running on and cinching nut. Forged from special alloy steel.



NO.	NOMINAL OPENING SIZES (A)	OPEN END			BOX END			TOTAL LENGTH (L)	WT., LBS.
		JAW DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)	NO. OF POINTS	HEAD O.D. (C)	HEAD THKNS. (D)		
1208	1/4"	.25"	.63"	.18"	12	.44"	.25"	3 5/16"	.02
1210	5/16"	.25"	.69"	.18"	12	.50"	.26"	3 3/4"	.03
1211	11/32"	.28"	.75"	.19"	12	.51"	.26"	4"	.06
1212	3/8"	.28"	.82"	.19"	12	.57"	.29"	4 1/2"	.06
1214	7/16"	.38"	.94"	.22"	12	.67"	.32"	5 1/4"	.10
1216	1/2"	.38"	1.05"	.25"	12	.78"	.34"	6"	.14
1218	9/16"	.50"	1.20"	.28"	12	.84"	.35"	6 3/4"	.19
1220	5/8"	.50"	1.33"	.31"	12	.92"	.41"	7 1/2"	.25
1222	11/16"	.56"	1.46"	.33"	12	1.01"	.45"	8 1/4"	.33
1224	3/4"	.59"	1.59"	.36"	12	1.09"	.48"	9 1/4"	.40
1226	13/16"	.63"	1.71"	.37"	12	1.19"	.51"	10 1/4"	.51
1228	7/8"	.69"	1.79"	.39"	12	1.26"	.51"	11 1/4"	.64
1230	15/16"	.75"	1.96"	.42"	12	1.36"	.55"	12 3/8"	.74
1232	1"	.75"	2.02"	.45"	12	1.46"	.57"	13 3/8"	.91
1234	1 1/16"	.81"	2.22"	.48"	12	1.54"	.61"	14 3/8"	1.12
1236	1 1/8"	.81"	2.33"	.49"	12	1.69"	.63"	15 3/4"	1.26
1240	1 1/4"	1.00"	2.59"	.51"	12	1.81"	.66"	17"	1.61
1242	1 5/16"	1.06"	2.70"	.54"	12	1.97"	.68"	18 1/8"	1.82
1244	1 3/8"	1.09"	2.83"	.57"	12	1.99"	.71"	19 3/8"	2.25
1246	1 7/16"	1.13"	2.97"	.63"	12	2.14"	.76"	20 5/8"	2.95
1248	1 1/2"	1.25"	3.06"	.63"	12	2.19"	.86"	21 3/4"	2.92
1252	1 5/8"	1.25"	3.31"	.66"	12	2.36"	.88"	23"	3.40
1254	1 11/16"	1.25"	3.31"	.66"	12	2.36"	.88"	23"	3.40
1256	1 3/4"	1.53"	3.59"	.75"	12	2.69"	.97"	24 1/2"	4.60
1258	1 13/16"	1.53"	3.59"	.75"	12	2.69"	.97"	24 1/2"	4.22
1260	1 7/8"	1.50"	3.94"	.81"	12	3.00"	1.06"	26"	5.78
1264	2"	1.44"	3.94"	.81"	12	3.00"	1.06"	26"	5.22
LONG-TYPE									
1208L	1/4"	.25"	.63"	.18"	6	.44"	.25"	4 13/16"	.04
1210L	5/16"	.25"	.69"	.19"	12	.50"	.26"	5 3/4"	.05
1212L	3/8"	.28"	.82"	.19"	12	.59"	.29"	6 5/8"	.08
1214L	7/16"	.38"	.94"	.22"	12	.68"	.32"	7 1/2"	.13
1216L	1/2"	.38"	1.05"	.25"	12	.76"	.34"	8 1/4"	.17
1218L	9/16"	.50"	1.20"	.28"	12	.84"	.35"	9 1/8"	.25
1220L	5/8"	.50"	1.33"	.31"	12	.94"	.41"	10"	.33
1222L	11/16"	.56"	1.46"	.33"	12	1.02"	.45"	10 7/8"	.38
1224L	3/4"	.59"	1.59"	.36"	12	1.10	.48"	11 3/4"	.51

HOW QUALITY IS BUILT INTO PROTO TOOLS

1. ALLOY STEEL

Our Protoloy® alloy has been developed for proper hardenability, toughness, and wear resistance: with carbon, chromium, boron, and maganese in proper proportions. A standard **jominy test** bar from every heat of steel is tested for hardness response. Only steel that tests show will make good tools is put into production.

NO. 1204E THROUGH 1212E MIDGET COMBINATION WRENCHES

Tiny time-savers in electronics and related fields for miniature assemblies. Comfortable grip handles; thin, narrow heads. Box head is 6 pt. Both openings same size and offset 15°. Finest drop-hammer forged alloy steel, heat treated and hardened for long wear. Openings broached to extremely close tolerances. Heads polished and finished in nickel chrome.

NO.	OPEN. SIZES	LENGTH	WT., LBS.
1204E	1/8"	2 3/4"	.02
1205E	5/32"	2 7/8"	.02
1206E	3/16"	3 1/16"	.02
1208E	1/4"	3 1/8"	.02
1209E	9/32"	3 5/16"	.02
1210E	5/16"	3 1/2"	.03
1211E	11/32"	3 23/32"	.04
1212E	3/8"	3 15/16"	.05

COMBINATION WRENCH SETS

NO. 1200E MIDGET COMBINATION WRENCH SET

This set includes 1204E through 1212E Midget Combination Wrenches in a 2422 Kit. Wt., .22 Lbs. See chart above for specifications.

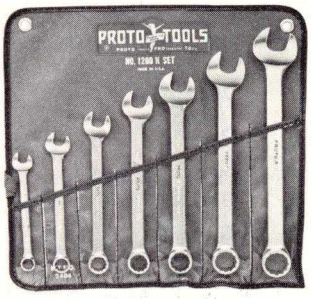
NO. 1200F SET

A master set of fifteen combination box and open end wrenches that will handle close to 100% of all jobs in most types of industry. Includes opening sizes from 5/16" through 1 1/4".

CONTENTS/NO. 1200F SET

NO.	SIZE OF OPENINGS	LENGTH
1210	5/16"	3 3/4"
1212	3/8"	4 1/2"
1214	7/16"	5 1/4"
1216	1/2"	6"
1218	9/16"	6 3/4"
1220	5/8"	7 1/2"
1222	11/16"	8 1/4"
1224	3/4"	9 1/4"
1226	13/16"	10 1/4"
1228	7/8"	11 1/4"
1230	15/16"	12 3/8"
1232	1"	13 3/8"
1234	1 1/16"	14 3/8"
1236	1 1/8"	15 3/4"
1240	1 1/4"	17"
2413	Vinyl Kit, 25"x18 1/2"	

Weight, 9.53 Lbs.



NO. 1200H SET

Popular basic set of seven combination box and open end wrenches. Sizes range from 3/8" through 3/4" in 1/16" steps.

CONTENTS/NO. 1200H SET

NO.	SIZE OF OPENINGS	LENGTH
1212	3/8"	4 1/2"
1214	7/16"	5 1/4"
1216	1/2"	6"
1218	9/16"	6 3/4"
1220	5/8"	7 1/2"
1222	11/16"	8 1/4"
1224	3/4"	9 1/4"
2404	Vinyl Kit, 11 3/8"x10 1/2"	

Weight, 1.85 Lbs.

NO. 1200L SET

A very useful set of the long-type, extra-leverage wrenches. Includes all nine available sizes, from 1/4" through 3/4".

CONTENTS/NO. 1200L SET

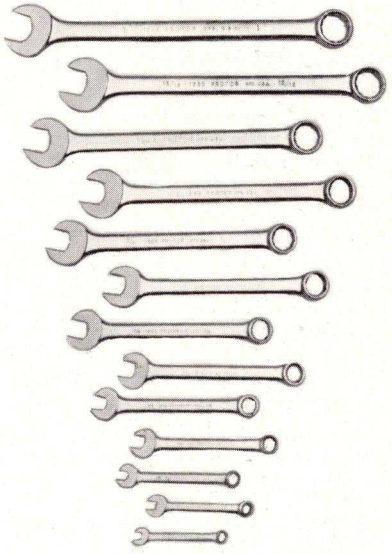
NO.	SIZE OF OPENINGS	LENGTH
1208L	1/4"	4 13/16"
1210L	5/16"	5 3/4"
1212L	3/8"	6 5/8"
1214L	7/16"	7 1/2"
1216L	1/2"	8 1/4"
1218L	9/16"	9 1/8"
1220L	5/8"	10"
1222L	11/16"	10 7/8"
1224L	3/4"	11 3/4"
2415	Vinyl Kit, 12 3/4"x13 1/8"	

Weight, 2.58 Lbs.

NO. 1200-80 COMBINATION WRENCH SET . . . 26 PIECE

Perfect repair and maintenance set for big machinery and rolling equipment. Saves time. 26 combination wrenches. Openings 1/4" to 2". A Proto exclusive.

Half set shown below.



CONTENTS/NO. 1200-80 SET

NO.	OPENING SIZE	NO.	OPENING SIZE
1208	1/4"	1234	1 1/16"
1210	5/16"	1236	1 1/8"
1212	3/8"	1240	1 1/4"
1214	7/16"	1242	1 5/16"
1216	1/2"	1244	1 3/8"
1218	9/16"	1246	1 7/16"
1220	5/8"	1248	1 1/2"
1222	11/16"	1252	1 5/8"
1224	3/4"	1254	1 11/16"
1226	13/16"	1256	1 3/4"
1228	7/8"	1258	1 13/16"
1230	15/16"	1260	1 7/8"
1232	1"	1264	2"

Weight of Set, 90.5 Lbs.

BRITISH STANDARD WRENCHES

Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.

NO.	BRIT. STAND. BOLT	WRCH. OP. SIZE	TOTAL LGTH.	WT., LBS.
1206BS	3/16	.34"	4"	.06
1208BS	1/4	.45"	5 1/4"	.10
1210BS	5/16	.53"	6"	.14
1212BS	3/8	.60"	7 1/2"	.26
1214BS	7/16	.71"	8 1/4"	.32
1216BS	1/2	.82"	10 1/4"	.55

See page 89 for Metric sizes.

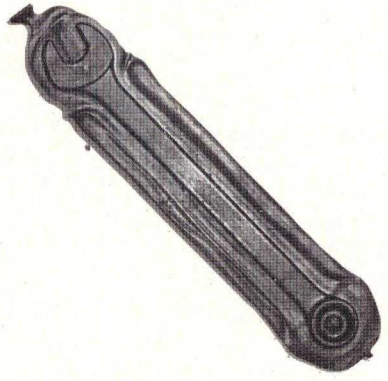
1725, 1730, 1731

Fedl. Description: "Box Wrench, Double Head, 12-Point, Half Moon." Specs.: GGG-W-00636c., Type II.

OBSTRUCTION 12-PT. BOX WRENCHES

For turning nuts where obstructions prevent easy access with standard box wrenches, and particularly useful on many starters. Clearance at middle is 1". Made of alloy steel and chrome plated.

NO.	NOMINAL OPENING SIZES	HEAD THICK-NESS	LENGTH	WT., LBS.
1725	7/16" x 1/2"	23/64"	5 3/4"	.12
1730	9/16" x 5/8"	3/8"	6 5/8"	.20
1731	5/8" x 3/4"	13/32"	7 5/8"	.33



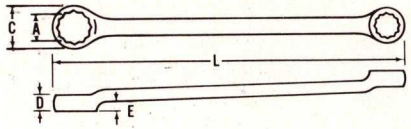
HOW QUALITY IS BUILT INTO PROTO TOOLS

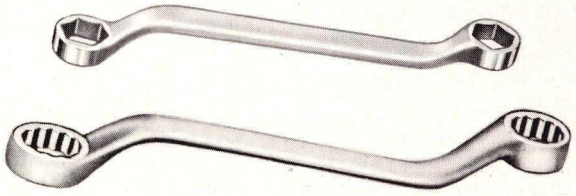
2. HOT FORGE

Alloy steels are pre-heated and forged under drop hammers. Hot forging shapes the steel and causes **grain flow.** Grain flow gives the steel and the tools maximum strength with minimum weight.

OFFSET BOX WRENCHES

Federal Description: "Box Wrench, Double Head, 12-Point, Double Offset Each End." Specs.: GGG-W-00636c., Type 1, Class 2, Style 1, (Nos. 8180-8185) and Style 2 (Nos. 8160-8163).





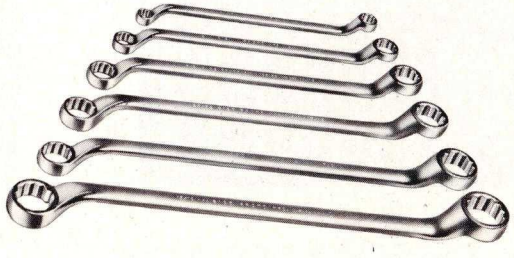
See page 48 for No. 1720 Deep Offset Box Wrench

Reach into casting depressions, counterbored places and other tight spots where usual wrenches cannot be used. Heads are offset 45°, providing the needed height for many jobs. Thin, strong box walls allow maximum clearance. Forged from special alloy steel and chrome plated.

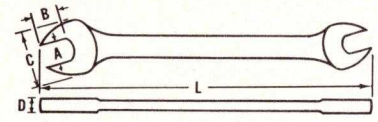
NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END C	SMALL OPENING END D	SMALL OPENING END E	LARGE OPENING END C	LARGE OPENING END D	LARGE OPENING END E	L	WT., LBS.
MIDGET TYPE—HEXAGON / 6-POINT									
8112	3/16" x 13/64"	.31"	.13"	.25"	.34"	.16"	.25"	2 7/8"	.01
8117	7/32" x 15/64"	.36"	.17"	.28"	.39"	.17"	.28"	3 1/8"	.01
8122	1/4" x 9/32"	.41"	.19"	.28"	.45"	.19"	.28"	3 1/2"	.02
8127	5/16" x 11/32"	.50"	.22"	.34"	.56"	.22"	.34"	3 7/8"	.04
SHORT TYPE—HEXAGON / 6-POINT									
8160H	3/8" x 7/16"	.63"	.31"	.56"	.72"	.31"	.56"	5"	.09
8161H	1/2" x 9/16"	.78"	.36"	.63"	.89"	.36"	.63"	5 1/2"	.14
SHORT TYPE—DOUBLE HEXAGON / 12-POINT									
8160	3/8" x 7/16"	.63"	.31"	.56"	.72"	.31"	.56"	5"	.08
8161	1/2" x 9/16"	.78"	.36"	.63"	.89"	.36"	.63"	5 1/2"	.12
8162	5/8" x 11/16"	.97"	.44"	.72"	1.03"	.44"	.72"	6"	.19
8163	3/4" x 13/16"	1.13"	.55"	.81"	1.25"	.55"	.81"	6 1/2"	.25
LONG TYPE—HEXAGON / 6-POINT									
8180H	3/8" x 7/16"	.63"	.31"	.56"	.72"	.34"	.56"	7 3/4"	.16
8181H	1/2" x 9/16"	.78"	.36"	.63"	.89"	.36"	.63"	9"	.26
LONG TYPE—DOUBLE HEXAGON / 12-POINT									
8180	3/8" x 7/16"	.63"	.31"	.56"	.72"	.34"	.56"	7 3/4"	.16
8181	1/2" x 9/16"	.78"	.36"	.63"	.89"	.36"	.63"	9"	.25
8182	5/8" x 11/16"	.97"	.41"	.72"	1.03"	.44"	.72"	10 1/4"	.38
8183	25/32" x 13/16"	1.19"	.50"	.81"	1.25"	.50"	.88"	11 1/2"	.46
8184	3/4" x 7/8"	1.13"	.50"	.81"	1.31"	.56"	.88"	12 3/4"	.66
8185	15/16" x 1"	1.38"	.63"	1.09"	1.44"	.63"	1.09"	14"	.93

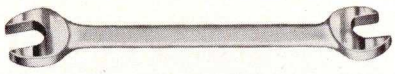
NO. 8100B LONG OFFSET WRENCH SET

Includes all six long type, 12-pt. wrenches. Nos. 8180-8185— in metal edge box. Wt., 3.3 Lbs.



Fedl. Description: "Engineer's Wrench, Double Head, Open End, 15°." Specs.: GGG-W-00636c., Type IV. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

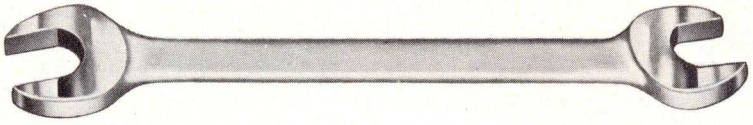




OPEN END WRENCHES 15° ANGLE

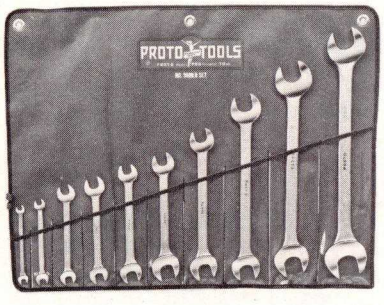
Speedy Type—with Streamlined Shanks and Narrow, Pear-Shaped Heads

Slim, scientifically tapered jaws reduce overall width of the pear-shaped heads to permit work in close places but are extra strong at points of greatest strain. Jaws have minimum overhang to speed seating on nut, increase strength and prevent jaw spreading. Opening bases have a radius determined for high strength. Heads have the correct thickness. Heads project from shank at 15° angle, permitting full rotation of a hex nut within only a 30° arc. Streamlined shanks are easy on hands, speed work and enhance appearance. Great strength and toughness—giving extra life—result from use of PROTO-LOY® special alloy steels, scientific grain-flow forging, and correct heat treatment. Chrome plating gives rust-proof, lustrous-appearing wrenches.



NO.	NOMINAL OPENING SIZES (A)	SMALL OPENING END			LARGE OPENING END			TOTAL LENGTH	WT., LBS.
		OPENING DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)	OPENING DEPTH (B)	HEAD WIDTH (C)	HEAD THKNS. (D)		
3016	3/16" x 1/4"	.19"	.47"	.17"	.20"	.53"	.17"	4 1/8"	.02
3018	1/4" x 5/16"	.20"	.54"	.17"	.24"	.66"	.17"	4 1/2"	.04
3020	3/8" x 5/16"	.27"	.66"	.20"	.31"	.78"	.20"	4 7/8"	.05
3021	3/8" x 7/16"	.33"	.79"	.21"	.38"	.91"	.21"	5 1/4"	.05
3025	7/16" x 1/2"	.33"	.91"	.23"	.38"	1.03"	.23"	5 5/8"	.10
3026	1/2" x 9/16"	.44"	1.03"	.25"	.47"	1.19"	.25"	6"	.14
3027	1/2" x 19/32"	.44"	1.03"	.25"	.47"	1.19"	.25"	6 3/8"	.15
3030	9/16" x 5/8"	44"	.1.16"	.28"	.53"	1.28"	.28"	6 3/4"	.23
3031	5/8" x 3/4"	.52"	1.28"	.33"	.63"	1.59"	.33"	7 3/16"	.27
3033	19/32" x 11/16"	.53"	1.28"	.31"	.55"	1.40"	.31"	7 5/8"	.26
3034	5/8" x 11/16"	.53"	1.28"	.31"	.56"	1.40"	.31"	8 1/8"	.28
3035	11/16" x 3/4"	.56"	1.40"	.33"	.63"	1.59"	.33"	8 9/16"	.32
3037	11/16" x 25/32"	.55"	1.40"	.33"	.69"	1.59"	.33"	9 1/2"	.42
3039	3/4" x 7/8"	.66"	1.59"	.36"	.69"	1.77"	.36"	10"	.45
3040	13/16" x 7/8"	.66"	1.62"	.36"	.70"	1.77"	.36"	10 1/2"	.51
3041	7/8" x 1 1/16"	.78"	1.96"	.42"	.78"	2.14"	.42"	11 1/8"	.70
3045	15/16" x 1"	.67"	1.96"	.42"	.78"	2.15"	.42"	12"	.81
3050	1 1/16" x 1 1/8"	.75"	2.08"	.48"	.97"	2.33"	.48"	13 7/8"	1.20
3051	1 1/16" x 1 1/4"	.78"	2.21"	.48"	1.13"	2.58"	.48"	14 7/8"	1.42
3055	1 1/4" x 1 5/16"	1.00"	2.52"	.54"	1.16"	2.83"	.54"	16 1/4"	1.76
3060	1 3/8" x 1 7/16"	1.03"	2.71"	.54"	1.09"	2.96"	.54"	17 3/4"	2.30
3070	1 1/2" x 1 5/8"	1.25"	2.95"	.62"	1.34"	3.26"	.62"	19 1/2"	3.10

See page 88 for Metric sizes



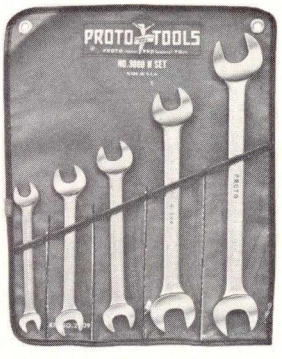
NO. 3000H OPEN END WRENCH SET

Set of ten open end wrenches in 15 different sizes for professional use. All opening sizes are from 1/4" through 1 1/8" in 1/16" steps.

CONTENTS/NO. 3000H SET

NO.	OPENING SIZES	LENGTH
3018	1/4" x 5/16"	4 1/2"
3020	5/16" x 3/8"	4 7/8"
3025	7/16" x 1/2"	5 5/8"
3026	1/2" x 9/16"	6"
3030	9/16" x 5/8"	6 3/4"
3031	5/8" x 3/4"	7 3/16"
3035	11/16" x 3/4"	8 9/16"
3040	13/16" x 7/8"	10 1/2"
3045	15/16" x 1"	12"
3050	1 1/16" x 1 1/8"	13 7/8"
2406	Vinyl Kit, 21 1/4"x15 1/2"	

Weight, 4.6 Lbs.



OPEN END WRENCH SET NO. 3000N

A very popular set. It includes five open end wrenches in the nine most-used sizes. Opening sizes are provided from 3/8" through 7/8" in 1/16" steps. A fine basic set to which more sizes can be added as they are needed.

CONTENTS/NO. 3000N SET

NO.	OPENING SIZES	LENGTH
3021	3/8" x 7/16"	5 1/4"
3026	1/2" x 9/16"	6"
3030	9/16" x 5/8"	6 3/4"
3035	11/16" x 3/4"	8 9/16"
3040	13/16" x 7/8"	10 1/2"
2409	Vinyl Kit, 9 1/2"x11 3/4"	

Weight, 1.72 Lbs.

Fedl. Description: "Tappet Wrench, Double Spearhead, Open End, 15°." Specs.: GGG-W-00636c., Type X, Class I. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

TAPPET WRENCHES OPEN END 15° ANGLE HEADS

Have 10" length which provides good leverage, keeps hands away from hot manifolds, and still permits use in close quarters. Extra-thin heads for close quarters. Wrench openings cover tappets, screws or lock nuts without excessive overhang, making them easier and faster to use. They are forged from fine alloy steel. Chrome finish.

NO.	NOMINAL OPENING SIZES	HEAD THICKNESS	LGTH.	WT., LBS.
3425	7/16" x 1/2"	.19"	10"	.15
3426	1/2" x 9/16"	.19"	10"	.16
3430	9/16" x 5/8"	.19"	10"	.24
3435	11/16" x 3/4"	.22"	10"	.27
3440	13/16" x 7/8"	.22"	10"	.35

CONTENTS/NO. 3400G SET

NO.	QUANTITY	OPENING SIZES
3425	1	7/16" x 1/2"
3426	2	1/2" x 9/16"
3430	1	9/16" x 5/8"
2412	Vinyl Kit, 6 3/4"x11 1/2"	

Weight, 1.02 Lbs.

Fedl. Description: "Engineer's Wrench, Double Head, Open End, 15°." Specs.: GGG-W-00636c., Type IV. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

MIDGET OPEN END WRENCHES 15° AND 60° ANGLE HEADS

Two openings on each wrench are duplicated on another wrench but at different head angles. Each pair (See 3210 & 3211.) provides two opening sizes in both 15° and 60° angles. These obstruction wrenches are used on small assemblies, carburetors, distributors, generators, electronic and electrical equipment. Chrome finish. Forged from alloy steel.

NOTE: Special sizes are available upon request.

NO.	NOMINAL OPENING SIZES 15° END	60° END	HEAD THICKNESS	LENGTH	WT., LBS.
3210	13/64"	15/64"	7/64"	3"	.02
3211	15/64"	13/64"	7/64"	3"	.02
3215	7/32"	1/4"	7/64"	3"	.02
3216	1/4"	7/32"	7/64"	3"	.02
3220	9/32"	5/16"	5/32"	3 1/2"	.03
3221	5/16"	9/32"	5/32"	3 1/2"	.03
3225	11/32"	3/8"	5/32"	3 3/4"	.04
3226	3/8"	11/32"	5/32"	3 3/4"	.04

IMPORTANT
SAFETY RULES FOR HAND TOOL USE

Hand tools, although commonly used, are specialized for particular jobs. Always use the right size and type of tool for the job being done. Keep tools in proper working condition.

"Mushroomed" heads of chisels and punches may chip and cause injury.

Screwdriver blades are made to turn screws; they should never be used for other purposes. Worn blades may slip and cause injury.

Only power drive sockets should be used on pneumatic or electric impact wrenches.

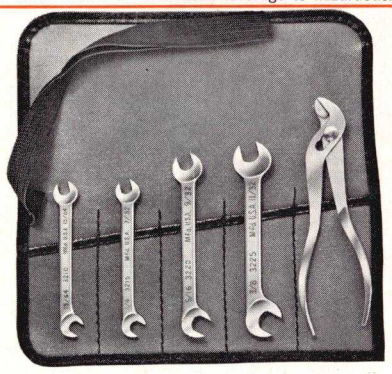
All wrenches are designed to a specific size-length-strength ratio. The use of a "cheater" or any other means for increased leverage is hazardous.

Keep hammer heads tightened on handle. Do not strike one hammer with another hammer.

Eye protection, through use of safety glasses or hood, is recommended for any job involving the use of tools; particularly when using punches, chisels and drills.

Use hand tools only for their designed purposes and within their size range.

Proto Tool Company cannot be responsible for injury or damage caused by tools improperly used; or from tools which have been abused or badly worn.



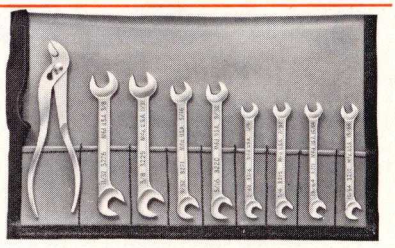
NO. 3200B SET/15° AND 60° ANGLE HEADS

A handy set of four obstruction-type wrenches with eight opening sizes, plus a midget plier.

CONTENTS/NO. 3200B SET

NO.	OPENING SIZES	LENGTH
3210	13/64" x 15/64"	3"
3215	7/32" x 1/4"	3"
3220	9/32" x 5/16"	3 1/2"
3225	11/32" x 3/8"	3 3/4"
235	Midget Plier	
2417	Vinyl Kit	

Weight, .28 Lb.



NO. 3200D SET/15° AND 60° ANGLE HEADS

A master set of all eight midget obstruction-type open end wrenches and a midget ignition plier.

CONTENTS/NO. 3200D SET

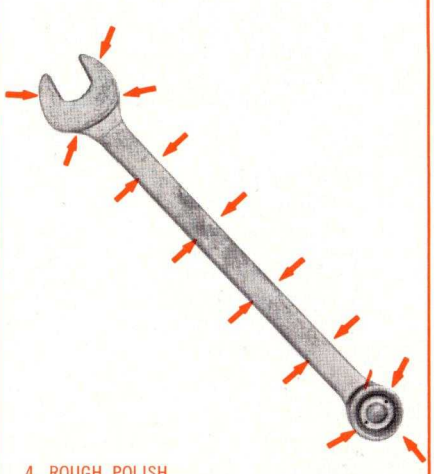
NO.	OPENING SIZES	LENGTH
3210	13/64" x 15/64"	3"
3211	15/64" x 13/64"	3"
3215	7/32" x 1/4"	3"
3216	1/4" x 7/32"	3"
3220	9/32" x 5/16"	3 1/2"
3221	5/16" x 9/32"	3 1/2"
3225	11/32" x 3/8"	3 3/4"
3226	3/8" x 11/32"	3 3/4"
235	Midget Plier	
2416	Vinyl Kit	

Weight, .40 Lb.

HOW QUALITY IS BUILT INTO PROTO TOOLS

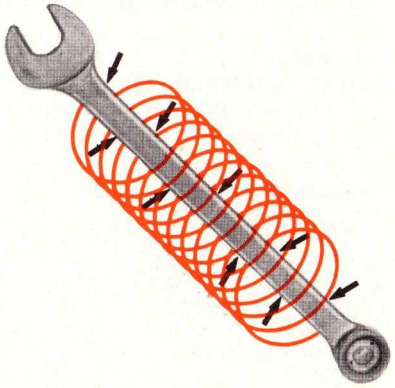
3. FLASH TRIM

Excess metal known as **forging flash** is trimmed from the wrench blank in accurately made hardened steel trim dies. The flash is scrap returned to the steel mill for remelting.



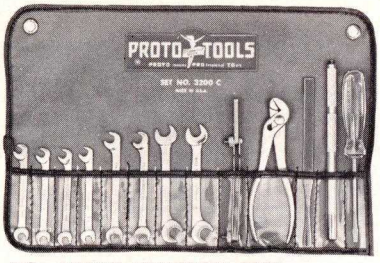
4. ROUGH POLISH

Roughness on the contours of trimmed wrench blanks is removed by hand belt polishing to smooth the contours of the wrench blank. (This operation is an "extra." Not all manufacturers use it. It is a part of the Proto Quality approach.)



5. ROTARY POLISH SHANKS

Final shaping of the contours is done on belt polishing machines that remove all work marks on the wrench shank and blend the edges to a professional feel to the hand.



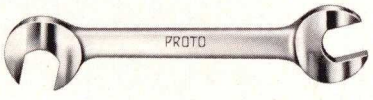
NO. 3200C IGNITION SET W/15° AND 60° ANGLE HEADS

All precision tools necessary for fine auto and marine tune-up. Handsome red and blue Vinyl fabric kit may be rolled or hung.

CONTENTS/NO. 3200C SET

NO.	DESCRIPTION
000-D	Ignition Gauge Set
235	Plier, Midget Slip Joint
2302	Point File-5"
3210	Wrench $^{13}/_{64}$" x $^{15}/_{64}$"
3211	Wrench $^{15}/_{64}$" x $^{13}/_{64}$"
3215	Wrench $^{7}/_{32}$" x $^{1}/_{4}$"
3216	Wrench $^{1}/_{4}$" x $^{7}/_{32}$"
3220	Wrench $^{9}/_{32}$" x $^{5}/_{16}$"
3221	Wrench $^{5}/_{16}$" x $^{9}/_{32}$"
3225	Wrench $^{11}/_{32}$" x $^{3}/_{8}$"
3226	Wrench $^{3}/_{8}$" x $^{11}/_{32}$"
9822	Screw Driver
9853	Screw Starter
2420	Vinyl Kit

Weight, .59 Lb.



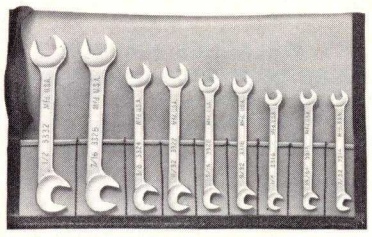
Fedl. Description: "Ignition Wrench, Double Head, Open End, 15° and 80° Heads." Specs.: GGG-W-00636c. Type VI, Style 2. See "Proto Conversion to Fedl. Stock No.'s" Bulletin No. 5918.

ANGLE HEAD WRENCHES 15° AND 80°

Both openings of these wrenches are the same size. 15° and 80° angle heads are needed for delicate adjustments on distributors, generators, and electronic equipment. For hard to reach bolts and nuts. All sizes have narrow shanks and small fillet radii forged from alloy steel. Chrome plated.

NO.	NOMINAL OPENING SIZE BOTH ENDS	HEAD THICKNESS	LENGTH	WT., LBS.
3314	$^{7}/_{32}$"	$^{7}/_{64}$"	3¼"	.02
3315	$^{15}/_{64}$"	$^{7}/_{64}$"	3¼"	.02
3316	¼"	$^{7}/_{64}$"	3¼"	.02
3318	$^{9}/_{32}$"	$^{5}/_{32}$"	3⅝"	.03
3320	$^{5}/_{16}$"	$^{5}/_{32}$"	3⅝"	.03
3322	$^{11}/_{32}$"	$^{5}/_{32}$"	4"	.04
3324	⅜"	$^{5}/_{32}$"	4"	.04
3328	$^{7}/_{16}$"	$^{11}/_{64}$"	4¾"	.07
3332	½"	$^{11}/_{64}$"	4¾"	.07
3336	$^{9}/_{16}$"	$^{3}/_{16}$"	5¾"	.14
3340	⅝"	$^{3}/_{16}$"	5¾"	.12

For standard nut and bolt sizes, corresponding to nominal wrench openings, see page 115.



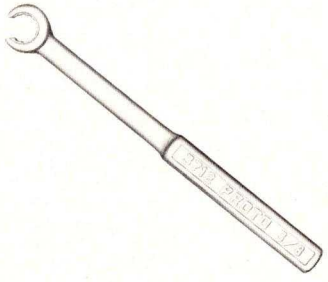
NO. 3300A SET W/15° AND 80° ANGLE HEADS

A highly useful set of nine obstruction-type midget open end wrenches with nine opening sizes.

CONTENTS/NO. 3300A SET

NO.	OPENING SIZES	LENGTH
3314	$^{7}/_{32}$"	3¼"
3315	$^{15}/_{64}$"	3¼"
3316	¼"	3¼"
3318	$^{9}/_{32}$"	3⅝"
3320	$^{5}/_{16}$"	3⅝"
3322	$^{11}/_{32}$"	4"
3324	⅜"	4"
3328	$^{7}/_{16}$"	4¾"
3332	½"	4¾"
2410	Vinyl Kit	

Weight, .42 Lb.

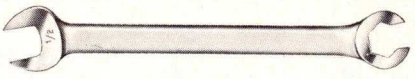


Fedl. Description: "Flare Nut Wrench, Single Head, Modified 12-Point." Specs.: GGG-W-00636c. Type XIV. See "Proto Conversion to Fedl. Stock No's." Bulletin No. 5918.

FLARE NUT WRENCHES /9-point

Meet rigid requirements of U.S. Navy and Air Force. For assembly and repair of fluid and gas lines on hydraulic units, air brake systems, compressors, and instruments. Nine gripping points, deep walls prevent slippage and distortion of soft metal fittings. Forged from special alloy steel and chrome plated.

NO.	OPENING	HEAD SLOT	HEAD THKNS.	LENGTH	WT., LBS.
3712	⅜"	$^{9}/_{32}$"	$^{5}/_{16}$"	6¼"	.23
3714	$^{7}/_{16}$"	$^{11}/_{32}$"	$^{11}/_{32}$"	6⅜"	.22
3716	½"	⅜"	$^{7}/_{16}$"	6½"	.24
3718	$^{9}/_{16}$"	$^{7}/_{16}$"	$^{7}/_{16}$"	6⅝"	.23
3720	⅝"	½"	$^{15}/_{32}$"	6¾"	.32
3724	¾"	⅝"	$^{9}/_{16}$"	7"	.38
3728	⅞"	$^{11}/_{16}$"	⅝"	7¼"	.48
3730	$^{15}/_{16}$"	¾"	⅝"	7⅜"	.46
3732	1"	¾"	$^{11}/_{16}$"	7½"	.58
3734	$1^{1}/_{16}$"	$^{13}/_{16}$"	¾"	7⅝"	.56
3736	$1^{1}/_{8}$"	⅞"	$^{25}/_{32}$"	7¾"	.66



NO. 3751 THROUGH 3757 COMBINATION FLARE NUT WRENCHES /6-point

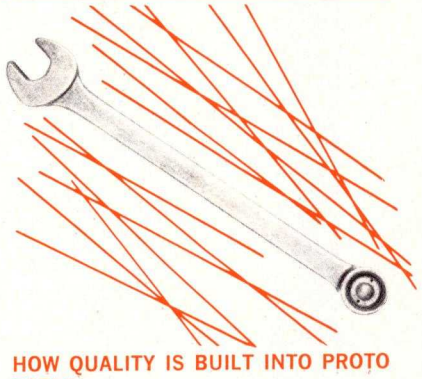
Designed to slip over tubing on to flare nut. Flare nut with open end. For use on tubing fittings—brake systems, compressors, fluid and gas lines, hydraulic units. Open end for light pressure or speed. Long handles for ample leverage. Thick heads won't damage soft metals. Forged from chrome plated special alloy steel.

NO.	OPENING	HEAD SLOT	HEAD THKNS.	LENGTH	WT., LBS.
3751	⅜"	$^{9}/_{32}$"	$^{11}/_{32}$"	$5^{11}/_{16}$"	.08
3752	$^{7}/_{16}$"	$^{11}/_{32}$"	⅜"	6"	.10
3753	½"	⅜"	⅜"	$6^{7}/_{16}$"	.18
3754	$^{9}/_{16}$"	$^{7}/_{16}$"	$^{7}/_{16}$"	$6^{15}/_{16}$"	.21
3755	⅝"	½"	$^{7}/_{16}$"	7⅝"	.29
3756	$^{11}/_{16}$"	$^{9}/_{16}$"	½"	$8^{11}/_{16}$"	.38
3757	¾"	⅝"	½"	$9^{3}/_{16}$"	.48

NO. 3700A COMBINATION FLARE NUT WRENCH SET /6-point

Seven wrenches, No. 3751 through 3757 as described previously. In vinyl kit.

Box end with opening for flare nuts.
Open end for light pressure or speed.
Long handles for ample leverage.
Thick heads that won't damage soft metals.
Forged from special alloy steel.
Wt. 1.94 Lbs.



HOW QUALITY IS BUILT INTO PROTO TOOLS

6. TUMBLE

A 4-to-8 hour tumble in slowly revolving rubber-lined barrels with selected abrasive materials removes all trace of polish marks on the surfaces of the wrench blanks.

Federal Specs.: GGG-W-00636c, Type V.
**Federal Specs.: GGG-W-00636c, Type IV.*

DROP FORGED ENGINEERS' WRENCHES (CARBON STEEL)
15° ANGLE — FOR STANDARD NUTS AND CAP SCREWS

Drop forged from high grade carbon steel, processed by improved methods. Openings are broached or milled to standard tolerances. Edges and surfaces are smooth. Sizes are stamped on polished heads. Hardened. Baked black enamel finish.

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. HEX. HEAD CAP SCREW; DIAM. SCREW	AMER. STD. LIGHT NUT (S.A.E.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	APPROX. WT., LBS.
C700	3/8"	—	3/16"	—	▪ 10"	4"	.08
C701	7/16"	—	1/4"	1/4"	1/4" & ▪ 12"	4 5/8"	.14
C1	1/2"	1/4"	5/16"	5/16"	—	4 5/8"	.12
C702	9/16"	—	3/8"	3/8"	5/16"	5 1/2"	.20
C703	5/8"	—	7/16"	7/16"	3/8"	6 3/8"	.29
C3	11/16"	3/8"	—	—	—	6 3/8"	.28
C704	3/4"	—	1/2"	1/2"	7/16"	7 1/4"	.44
C705	13/16"	—	9/16"	—	1/2"	8"	.56
C5	7/8"	1/2"	5/8"	9/16"	9/16"	8"	.55
C6A	15/16"	—	—	5/8"	—	9 1/8"	.74
C6	31/32"	9/16"	—	—	—	9 1/8"	.75
C706	1"	—	3/4"	11/16"	5/8"	9 1/8"	.72
C7	1 1/16"	5/8"	—	3/4"	—	10 1/2"	1.40
C707	1 1/8"	—	7/8"	—	3/4"	10 1/2"	1.20
C8	1 1/4"	3/4"	1"	7/8"	—	12"	1.90
C8A	1 5/16"	—	—	—	7/8"	12"	1.98
C708A	1 3/8"	—	1 1/8"	—	—	12"	1.86
C9	1 7/16"	7/8"	—	1"	—	13 7/8"	2.22
C709	1 1/2"	—	1 1/4"	—	1"	13 7/8"	2.22
C10	1 5/8"	1"	1 3/8"	1 1/8"	—	14 3/4"	3.44
C11	1 13/16"	1 1/8"	—	1 1/4"	—	16 1/2"	4.82
C11A	1 7/8"	—	—	—	1 1/4"	16 1/2"	4.84
C12	2"	1 1/4"	—	1 3/8"	—	18 1/4"	6.28
C13	2 3/16"	1 3/8"	—	1 1/2"	—	20"	7.78
C13A	2 1/4"	—	—	—	1 1/2"	20"	7.90
C14	2 3/8"	1 1/2"	—	—	—	22"	9.40
C14A	2 7/16"	—	—	—	1 5/8"	22"	9.66
C15	2 9/16"	1 5/8"	—	—	—	24"	12.80
C15A	2 5/8"	—	—	—	1 3/4"	24"	12.60
C16	2 3/4"	1 3/4"	—	—	—	27 1/2"	15.56
C16B	2 13/16"	—	—	—	1 7/8"	27 1/2"	15.76

▪*Amer. Std. Machine Screw and Stove Bolt Nuts.*

*C721	5/16" & 3/8"	1/8" —	1/8" & 3/16"	— —	— —	4"	.06
*C722	5/16" & 7/16"	1/8" —	1/8" & 1/4"	— 1/4"	— 1/4"	4 5/8"	.10
C723	3/8" & 7/16"	— —	3/16" & 1/4"	— 1/4"	— 1/4"	4 5/8"	.10
*C723A	3/8" & 1/2"	— 1/4"	3/16" & 5/16"	— 5/16"	— —	4 5/8"	.09
C725	7/16" & 1/2"	— 1/4"	1/4" & 5/16"	1/4" & 5/16"	1/4" —	5 1/2"	.16
C725A	7/16" & 9/16"	— —	1/4" & 3/8"	1/4" & 3/8"	1/4" & 5/16"	5 1/2"	.16
*C725B	1/2" & 9/16"	1/4" —	5/16" & 3/8"	5/16" & 3/8"	— 5/16"	5 1/2"	.18
C726	1/2" & 5/8"	1/4" —	5/16" & 7/16"	5/16" & 7/16"	— 3/8"	6 1/2"	.22
C727	9/16" & 5/8"	— —	3/8" & 7/16"	3/8" & 7/16"	5/16" & 3/8"	6 1/2"	.22
C728	9/16" & 3/4"	— —	3/8" & 1/2"	3/8" & 1/2"	5/16" & 7/16"	7 1/2"	.34
C729	5/8" & 3/4"	— —	7/16" & 1/2"	7/16" & 1/2"	3/8" & 7/16"	7 1/2"	.33
C731	3/4" & 13/16"	— —	1/2" & 9/16"	1/2" —	7/16" & 1/2"	8 1/2"	.53
C731A	3/4" & 7/8"	— 1/2"	1/2" & 5/8"	1/2" & 9/16"	7/16" & 9/16"	8 1/2"	.51
C31	25/32" & 7/8"	7/16" & 1/2"	— 5/8"	— 9/16"	— 9/16"	8 1/2"	.49
C731B	13/16" & 7/8"	— 1/2"	9/16" & 5/8"	— 9/16"	1/2" & 9/16"	8 1/2"	.49
C733	7/8" & 1"	1/2" —	5/8" & 3/4"	9/16" —	9/16" & 5/8"	9 1/2"	.70
C34	7/8" & 1 1/16"	1/2" & 5/8"	5/8" —	9/16" & 3/4"	9/16" —	10 3/4"	.70
C735	1" & 1 1/8"	— —	3/4" & 7/8"	— —	5/8" & 3/4"	10 3/4"	.84
C37	1 1/16" & 1 1/4"	5/8" & 3/4"	— --	3/4" & 7/8"	— —	12"	1.92
C737	1 1/8" & 1 1/4"	— 3/4"	7/8" —	— 7/8"	3/4" —	12"	1.80
C37A	1 1/8"▪ & 1 5/16"	— —	7/8" & 1"	— —	3/4" & 7/8"	12"	1.85
C39	1 1/4" & 1 7/16"	3/4" & 7/8"	— —	7/8" & 1"	— —	13 1/2"	2.72
C40	1 1/4" & 1 5/8"	3/4" & 1"	— —	7/8" & 1 1/8"	— —	15 3/4"	3.78
C41	1 7/16" & 1 5/8"	7/8" & 1"	— —	1" & 1 1/8"	— —	15 3/4"	4.10
C42A	1 1/2" & 1 11/16"	— —	1 1/8" & 1 1/4"	— —	1" & 1 1/8"	18"	5.16
*C43	1 5/8" & 1 13/16"	1" & 1 1/8"	— —	1 1/8" & 1 1/4"	— —	18"	5.42
*C44A	1 11/16" & 1 7/8"	— —	1 1/4" —	— —	1 1/8" & 1 1/4"	19"	7.04
*C45	1 13/16" & 2"	1 1/8" & 1 1/4"	— —	1 1/4" & 1 3/8"	— —	19"	6.56

NOTE: For standard and bolt sizes corresponding to nominal wrench openings, see chart on page 115.

HEAVY DUTY INDUSTRIAL WRENCHES

Federal Specs.: GGG-W-665, Type II, Grade A.

SPANNERS (CARBON STEEL)

PIN SPANNER

Single milled pin fits into notches of round nuts. Pin and wrench are drop forged together from high grade carbon steel. Smooth surfaces. Hardened. Baked black enamel finish.

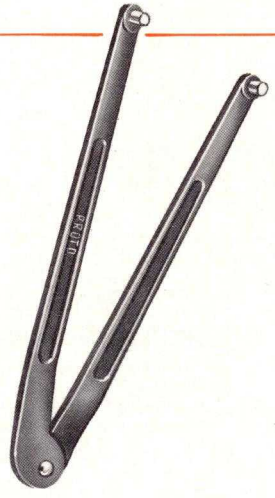
NO.	FOR CIRCLE: DIAMETER	EXTREME LENGTH APPROX.	FINISHED DIAMETER PIN	APPROX. WT., LBS.
C452	1″	4″	3/16″	.06
C453	1 1/4″	4 1/2″	13/64″	.10
C454	1 1/2″	5″	7/32″	.13
C455	1 3/4″	5 1/2″	15/64″	.16
C456	2″	6″	1/4″	.16
C457	2 1/4″	6 1/2″	17/64″	.22
C458	2 1/2″	7″	9/32″	.28
C459	2 3/4″	7 1/2″	19/64″	.35
C460	3″	8″	5/16″	.35
C461	3 1/4″	8 1/2″	21/64″	.42
C462	3 1/2″	9″	11/32″	.49
C463	3 3/4″	9 1/2″	23/64″	.57
C464	4″	10″	3/8″	.67
C466	5″	12″	7/16″	1.05
C468	6″	14″	1/2″	1.47

Federal Specs.: GGG-W-665, Type III, Class 1.

ADJUSTABLE FACE SPANNER

A valuable tool for operations where the number of center dimensions vary. Pins and wrench are drop forged together from high grade steel. Milled pins. Smooth surfaces. Hardened. Baked black enamel finish.

NO.	EXTREME CAPACITY	EXTREME LENGTH APPROX.	DIAMETER OF PINS	WT., LBS.
C482	2″	6 3/8″	3/16″	.30
C483	3″	8 1/4″	1/4″	.53
C484	4″	10 3/8″	5/16″	1.04



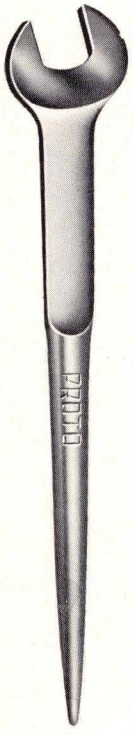
Federal Specs.: GGG-W-665, Type I, Class 1.

ADJUSTABLE HOOK SPANNER

Strong and easily adjusted to many sizes, this is an ideal spanner on spindle bearings or for adjusting collars and slotted rings on automatic machinery. Jaw and bar are drop forged, jaw hardened and tempered. Smooth surfaces, baked black enamel finish.

NO.	CAPACITY FOR CIRCLES, DIAMETER	APPROX. LENGTH	THICKNESS		DEPTH HOOK	WT., LBS.
			HANDLE	HOOK		
C471	3/4″ to 2″	6 1/2″	1/4″	3/8″	1/8″	.28
C472	1 1/4″ to 3″	8 1/8″	9/32″	13/32″	5/32″	.46
C474	2″ to 4 3/4″	11 1/4″	5/16″	1/2″	3/16″	1.00
C474A	4 1/2″ to 6 1/4″	12 1/8″	5/16″	1/2″	1/4″	1.10

PROTO PROFESSIONAL TOOLS



CONSTRUCTION WRENCHES (CARBON STEEL)
15° ANGLE

Deep opening assures strong bearing on square nuts. Long, round, tapered handle inserts easily into bolt holes when bringing them into line. Drop forged from high grade carbon steel. Milled. Sizes stamped. Hardened all over. Shot blasted.

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	THICKNESS HEAD	APPROX. WT., LBS.
C205A	13/16"	—	1/2"	14 1/2"	9/16"	1.30
C205	7/8"	1/2"	9/16"	14 1/2"	9/16"	1.32
C206	31/32"	9/16"	—	14 1/2"	9/16"	1.30
C206B	1"	—	5/8"	14 1/2"	9/16"	1.28
C207	1 1/16"	5/8"	—	17"	5/8"	2.13
C207A	1 1/8"	—	3/4"	17"	5/8"	2.13
C208	1 1/4"	3/4"	—	19"	3/4"	3.60
C208A	1 5/16"	—	7/8"	19"	3/4"	3.56
C209	1 7/16"	7/8"	—	19"	3/4"	3.58
C209A	1 1/2"	—	1"	19"	3/4"	3.54
C210	1 5/8"	1"	—	25"	1 1/16"	7.80
C210A	1 11/16"	—	1 1/8"	25"	1 1/16"	7.75
C211	1 13/16"	1 1/8"	—	25"	1 1/16"	7.58
C211A	1 7/8"	—	1 1/4"	25"	1 1/16"	7.52
C212	2"	1 1/4"	—	25"	1 1/16"	7.26

Federal Specs.: GGG-W-636a, Type IX, Class 1 and GGG-W-00636b.

STRUCTURAL WRENCHES (CARBON STEEL)

Jaws are deep and narrow for secure seating on nuts. Handle angle and offset clears close obstructions with safety to the hand. Round, tapered handle inserts easily into bolt holes. Wrench is well balanced. Drop forged from high grade carbon steel. Milled. Sizes stamped. Hardened all over and shot blasted.

NO.	NOMINAL OPENING	AMER. STD. HEAVY NUT (U.S.S.) SIZE BOLT	AMER. STD. REGULAR NUT; SIZE BOLT	APPROX. LENGTH	THICKNESS HEAD	HANDLE OFFSET AT HEAD	HANDLE OFFSET AT END	APPROX. WT., LBS.
C901A	7/16"	—	1/4"	9 1/4"	11/32"	3/4"	2"	.33
C901	1/2"	1/4"	—	9 1/4"	11/32"	3/4"	2"	.33
C901B	9/16"	—	5/16"	9 1/4"	11/32"	3/4"	2"	.33
C903A	5/8"	—	3/8"	11 3/4"	7/16"	3/4"	2 1/4"	.54
C903	11/16"	3/8"	—	11 3/4"	7/16"	3/4"	2 1/4"	.54
C904A	3/4"	—	7/16"	11 3/4"	7/16"	3/4"	2 1/4"	.54
C904	25/32"	7/16"	—	11 3/4"	7/16"	3/4"	2 1/4"	.54
C905A	13/16"	—	1/2"	14 1/4"	9/16"	7/8"	2 1/4"	1.2
C905	7/8"	1/2"	9/16"	14 1/4"	9/16"	7/8"	2 1/4"	1.2
C906	31/32"	9/16"	—	14 1/4"	9/16"	7/8"	2 1/4"	1.2
C906B	1"	—	5/8"	14 1/4"	9/16"	7/8"	2 1/4"	1.2
C907	1 1/16"	5/8"	—	17 1/4"	21/32"	1"	2 1/4"	1.9
C907A	1 1/8"	—	3/4"	17 1/4"	21/32"	1"	2 1/4"	1.9
C908	1 1/4"	3/4"	—	19 1/2"	13/16"	1 1/4"	3"	3.9
C908A	1 5/16"	—	7/8"	19 1/2"	13/16"	1 1/4"	3"	3.9
C909	1 7/16"	7/8"	—	19 1/2"	13/16"	1 1/4"	3"	3.9
C909A	1 1/2"	—	1"	19 1/2"	13/16"	1 1/4"	3"	3.9
C910	1 5/8"	1"	—	23 1/4"	15/16"	1 5/8"	3"	7.6
C910A	1 11/16"	—	1 1/8"	23 1/4"	15/16"	1 5/8"	3"	7.6
C911	1 13/16"	1 1/8"	—	23 1/4"	15/16"	1 5/8"	3"	7.6
C911A	1 7/8"	—	1 1/4"	23 1/4"	15/16"	1 5/8"	3"	7.6
C912	2"	1 1/4"	—	23 1/4"	15/16"	1 5/8"	3"	7.6

NOTE: For standard and bolt sizes corresponding to nominal wrench openings, see chart on page 115.

HEAVY DUTY INDUSTRIAL WRENCHES

PROTO PROFESSIONAL TOOLS

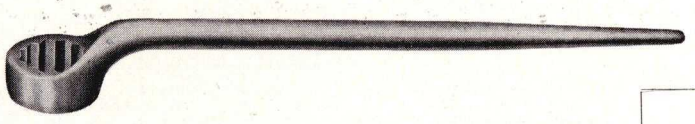
Fedl. Description: "Structural Wrench, Offset Handle, Box, 12-Pt., Single Head." Specs.: GGG-W-00636c., Type IX, Class 2. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

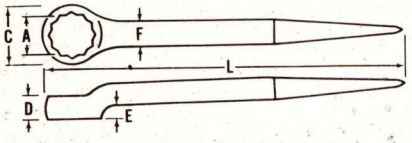
HEAVY-DUTY INDUSTRIAL WRENCHES

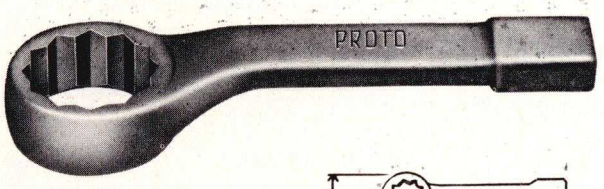
HEAVY-DUTY SPUD-END 12-POINT BOX TYPE

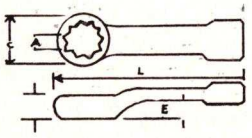
These wrenches are ideal for construction, refineries, etc. You will note the innovation of a box end in this wrench, a real safety factor. Makes quick work of loosening frozen or rusted bolts or nuts. The spud end is very handy for aligning holes in flanges. Note the clearance provided by the offset head which overcomes the usual clearance problems. Forged from alloy steel, they are extra strong. Parco-Lubrite finish protects them from rust.

NO.	NOMINAL OPENING SIZE (A)	HEAD O.D. (C)	HEAD THICK-NESS (D)	HEAD OFFSET (E)	SHANK DIAM-ETER (F)	TOTAL LENGTH (L)	WT., LBS.
2615	15/16"	1.34"	.63"	1.09"	.69"	14 1/2"	1.13
2617	1 1/16"	1.56"	.69"	.94"	.75"	15 5/8"	1.30
2618	1 1/8"	1.59"	.69"	.94"	.75"	16 1/4"	1.94
2620	1 1/4"	1.78"	.81"	1.06"	.75"	17"	2.20
2623	1 7/16"	2.13"	.94"	1.37"	.87"	19"	3.00
2624	1 1/2"	2.19"	1.00"	1.50"	.87"	20 1/8"	3.30
2626	1 5/8"	2.47"	1.13"	1.50"	.87"	21 1/4"	3.60
2627	1 11/16"	2.47"	1.13"	1.50"	.87"	22 1/4"	3.70
2629	1 13/16"	2.91"	1.25"	1.56"	1.00"	23 1/4"	5.50
2630	1 7/8"	2.91"	1.25"	1.66"	1.00"	23 1/4"	5.60
2632	2"	3.16"	1.38"	1.66"	1.00"	24 1/4"	6.00
2635	2 3/16"	3.47"	1.50"	1.87"	1.00"	26"	6.40
2638	2 3/8"	3.72"	1.63"	2.00"	1.00"	26 3/4"	7.00
2641	2 9/16"	4.00"	1.50"	2.25"	1.06"	28"	8.70
2644	2 3/4"	4.00"	1.50"	2.25"	1.06"	29"	8.20





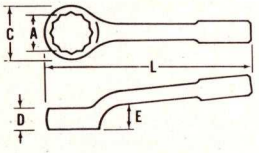




SLUGGING WRENCHES/ 12-POINT BOX TYPE

For all types of heavy installation and repair work where space is restricted. Opening fits snugly upon bolt or nut and remains in position when struck with heavy sledge. Forged from special alloy steel and protected from rust by Parco-Lubrite finish.

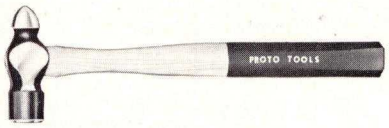
NO.	NOM. OPEN. SIZE (A)	HEAD O.D. (C)	HEAD THKNS. (D)	HEAD OFFSET (E)	TOTAL LENGTH (L)	WT., LBS.
USN321	1 5/16"	2.38"	.88"	.69"	8 3/8"	2.8
USN323	1 7/16"	2.38"	.88"	.69"	8 3/8"	2.8
USN324	1 1/2"	2.75"	1.13"	1.00"	10"	3.0
USN326	1 5/8"	2.75"	1.13"	1.00"	10 1/8"	3.2
USN327	1 11/16"	2.75"	1.13"	1.00"	10 1/8"	3.1
USN329	1 13/16"	2.75"	1.13"	1.00"	10 1/8"	3.0
USN330	1 7/8"	3.00"	1.25"	1.12"	10 3/4"	4.0
USN332	2"	3.00"	1.25"	1.12"	10 3/4"	3.8
USN335	2 3/16"	3.56"	1.38"	1.25"	11"	5.0
USN336	2 1/4"	3.56"	1.38"	1.25"	11"	4.9
USN338	2 3/8"	4.13"	1.63"	1.50"	14 1/2"	8.6
USN341	2 9/16"	4.13"	1.63"	1.50"	14 1/2"	8.3
USN342	2 5/8"	4.13"	1.63"	1.50"	14 1/2"	8.0
USN344	2 3/4"	4.13"	1.63"	1.50"	14 1/2"	7.7
USN347	2 15/16"	4.63"	1.88"	1.75"	15 3/4"	12
USN348	3"	4.63"	1.88"	1.75"	15 3/4"	12
USN350	3 1/8"	4.63"	1.88"	1.75"	15 3/4"	11
USN354	3 3/8"	5.25"	2.00"	1.87"	17 3/8"	16
USN356	3 1/2"	5.25"	2.00"	1.87"	17 3/8"	15
USN360	3 3/4"	5.50"	2.50"	1.88"	15 3/4"	15
USN362	3 7/8"	5.50"	2.50"	1.88"	15 3/4"	15
USN366	4 1/8"	6.13"	2.88"	0.00"	18"	26
USN368	4 1/4"	6.13"	2.88"	0.00"	18"	25
USN372	4 1/2"	6.63"	3.00"	0.00"	19 3/4"	34
USN374	4 5/8"	6.63"	3.00"	0.00"	19 3/4"	33



STRIKING WRENCHES, 12-POINT BOX TYPE

Striking wrenches have a square striking surface for use with a sledge or hammer. They are offset to allow maximum clearance. These wrenches are necessary for use on large bolts and nuts in restricted quarters. Like all of the heavy-duty Proto industrial wrenches, they are noted for their great strength, being forged from Proto-specified alloy steels. Although strong enough for extra heavy duty, they are streamlined to reduce unnecessary weight. Rust protection is by Parco-Lubrite finish.

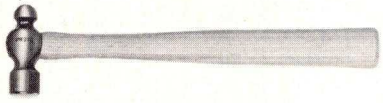
NO.	NOMINAL OPENING SIZE (A)	HEAD O.D. (C)	HEAD THICK-NESS (D)	HEAD OFFSET (E)	TOTAL LENGTH (L)	WT., LBS.
2617SW	1 1/16"	1.69"	.63"	.94"	8 1/2"	1.70
2618SW	1 1/8"	1.69"	.63"	.94"	8 1/2"	1.60
2620SW	1 1/4"	1.88"	.81"	1.19"	10 3/4"	3.20
2621SW	1 5/16"	1.88"	.81"	1.19"	10 3/4"	3.00
2623SW	1 7/16"	2.19"	1.00"	1.50"	12"	4.70
2624SW	1 1/2"	2.19"	1.00"	1.50"	12"	4.40
2626SW	1 5/8"	2.41"	1.13"	1.50"	12 1/4"	4.65
2627SW	1 11/16"	2.41"	1.13"	1.50"	12 1/4"	4.50
2629SW	1 13/16"	2.66"	1.19"	1.56"	13 7/16"	6.60
2630SW	1 7/8"	2.84"	1.25"	1.66"	13 7/16"	6.80
2632SW	2"	2.84"	1.25"	1.66"	13 7/16"	6.60
2635SW	2 3/16"	3.38"	1.50"	2.00"	13 1/2"	8.20
2638SW	2 3/8"	3.38"	1.50"	2.00"	13 1/2"	7.80
2641SW	2 9/16"	4.00"	1.50"	2.25"	13 1/2"	8.70
2644SW	2 3/4"	4.00"	1.50"	2.25"	13 1/2"	8.20
2647SW	2 15/16"	4.44"	1.88"	2.62"	16"	12.60
2650SW	3 1/8"	4.44"	1.88"	2.62"	16"	12.00



BALL PEIN HAMMERS AND HANDLES

The perfect ball pein for all industries. Accurately balanced. Tough drop-forged head, selectively-hardened face and pein. High grade alloy steel. Polished face, chamfer, cheeks and pein. Fine quality hickory handles. Comfortable octagon shape handle. Clear lacquer finish, plus green lacquer "grip." Full spread of all popular sizes. Like all Proto tools, these hammers are of guaranteed quality, built to do the job faster.

NO.	WOOD HANDLES	LENGTH	WT., LBS.	CLASS
1304P	1304PH	11"	.40	4 Oz.
1308P	1308PH	12"	.64	8 Oz.
1312P	1312PH	13"	1.06	12 Oz.
1316P	1316PH	14½"	1.40	1 Lb.
1324P	1324PH	15"	1.90	1½ Lb.
1332P	1332PH	15⅞"	2.32	2 Lb.
1340P	1340PH	16⅜"	2.80	2½ Lb.



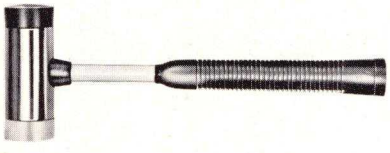
BALL PEIN HAMMERS AND HANDLES

(Semi-Finished Head)

The perfect ball pein hammer for all industries. Accurately balanced. Tough drop-forged head, selectively hardened face and pein. High grade alloy steel. Fine quality hickory handles. Comfortable shaped handles with clear lacquer finish. Full spread of all popular sizes. Like all Proto tools, these hammers are guaranteed quality, built to do the job faster.

NO.	WOOD HANDLES	LENGTH	WT. LBS.	CLASS
1308	1308PH	12"	.67	8 Oz.
1312	1312PH	13"	1.06	12 Oz.
1316	1316PH	14½"	1.40	1 Lb.
1324	1324PH	15"	1.90	1½ Lb.
1332	1332PH	15⅞"	2.32	2 Lb.

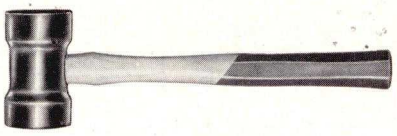
SPECIAL HAMMERS



NOS. 1360, 1362, 1364 SOFT FACE HAMMERS

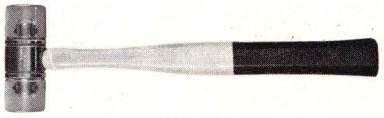
Each hammer has medium and tough plastic tips that will not chip, flake or mushroom. Fiberglas shaft will not rot or split. Zinc head won't fly off. No. 1360, .72 Lbs. No. 1362, .96 Lbs. No. 1364, 1.90 Lbs. Replaceable Tips, No. M Medium, .04 Lbs. No. T Tough, .04 Lbs.

For replacement tips, order No. 1360M (Medium) or 1360T (Tough) for above hammers.



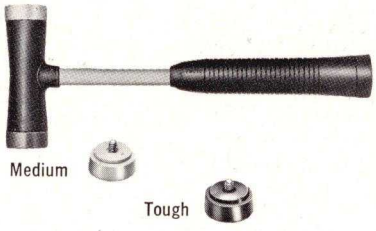
NO. 1368 RUBBER MALLET

Soft but tough, non-flaking Neoprene head prevents damage. Ideal for garages, service stations, cabinet shops, etc. Hour-glass design has 2⅝" faces. Weight, 1.46 Lbs. No. 1368H Spare Handle.



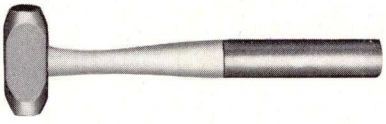
NO. 1383 PLASTIC-TIP HAMMER

With replaceable 1⅝" round tips of tough amber plastic. Weight, .76 Lb. Spare Tip No. 1370C. No. 1370H Spare Handle.



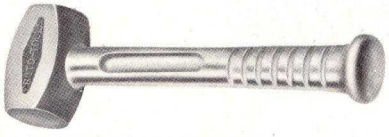
NO. 1384 MECHANICS HAMMER

Light weight plastic soft-face hammer for light work. No-mar replaceable tips — tough, non-sparking. Shot-loaded head adds 30% more power, reduces rebound and worker fatigue. Fiberglas shaft, plastic grip. Weight, .66 Lbs. Spare Tips—No. 1384M (Medium) No. 1384T (Tough).



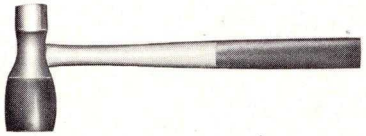
NO. 1430 BRASS HAMMER

1½ lb. head, all-purpose non-marring hammer for bushings, gears, transmission work, etc. Tapered head for good clearance minimizes mushrooming. Weight, 1.84 Lbs. No. 1430H Spare Handle.



NO. 1431 BRASS HAMMER

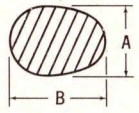
An Indianapolis "500" special, this hammer is used by mechanics to knock off wheels during pit stops. Brass head and aluminum handle are cast together. Head cannot fly off. Handle designed to meet requests of racing mechanics. Weight, 4.90 lbs. Length, 11⅞".



NO. 1448 TWO-WAY HAMMER

Forged steel head and replaceable rubber head. Ideal for mounting tires, drawing rivets and many other jobs. Weight, 2.6 Lbs. No. 1448B Spare Rubber Head. No. 1416H Spare Handle.

HAMMER HANDLES



WOOD HANDLES

NO.	FOR HAMMERS
1304PH	1304P
1308PH	1308P 1308
1312PH	1312P 1312
1316PH	1316P 1316
1324PH	1324P 1324
1332PH	1332P 1332
1340PH	1340P

NO.	EYE SIZE A	EYE SIZE B	LENGTH	WT., LBS.
1304PH	13/32"	39/64"	11½"	.15
1308PH	15/32"	49/64"	12½"	.23
1312PH	½"	27/32"	13 7/16"	.25
1316PH	17/32"	27/32"	15"	.30
1324PH	21/32"	1"	15⅝"	.40
1332PH	21/32"	1"	16 3/16"	.42
1340PH	23/32"	1 3/32"	16¾"	.46

WOOD HANDLES

Tough, second growth, straight-grained hickory, shaped and finished for comfortable, sure grip. Wedge furnished with handle.

NO.	FOR HAMMERS
1368H	1368 (No Wedge Inc.)
1370H	1383
1416H	1448
1419H	1419
1424H	1424 & 1427
1426H	1421, 1425, 1426 & 1428
1429H	1429
1430H	1430

NO.	EYE SIZE A	EYE SIZE B	LENGTH	WT., LBS.
1368H	15/32"	⅞"	16 1/16"	.44
1370H	17/32"	Diam.	12¼"	.23
1416H	⅝"	1"	17⅜"	.48
1419H	1 1/32"	1 1/16"	11⅛"	.17
1424H	1 1/32"	1 1/16"	13⅛"	.18
1426H	1 3/32"	1 3/16"	13"	.22
1429H	⅜"	1 1/16"	17⅜"	.30
1430H	15/32"	⅞"	12 1/16"	.25

NO. 1421GH FIBERGLAS HANDLE

(For use with Nos. 1360, 1362, 1364 Soft Faced Hammers and No. 1421G.)

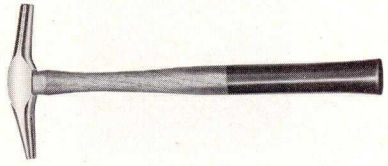
Including handle, resin, catalyst, mixing stick, instruction sheet, in metal edge box. Wt. .40 Lbs.

PROTO PROFESSIONAL TOOLS

Federal Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

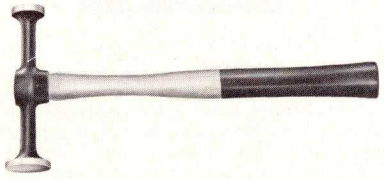
BODY AND FENDER HAMMERS

These hammers are forged from special alloy steel and are designed to speed and simplify repairs. They have good balance, highly polished faces, and proper weight and clearances. Handles (listed on page 30) are of tough second growth hickory.



NO. 1419 MAGNETIC UPHOLSTERERS HAMMER

A favorite because of its long reach and head radii. The head is curved in the arc of a natural swing. Length of head, 5¾". Weight, .57 Lb. No. 1419H—Spare Handle.

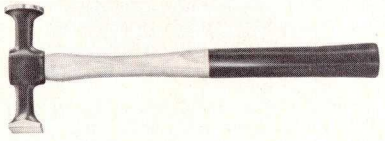


NO. 1421 DINGING HAMMER

Has large face for roughing the bad ones into shape for finishing. Head is 6" long, with 1¼" and 1⅝" round faces. Faces are slightly crowned. Weight, 1.00 Lb. No. 1426H—Spare Handle.

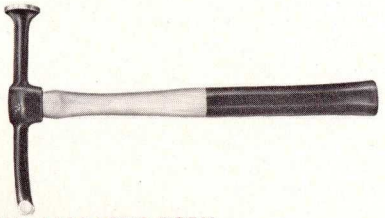
NO. 1424 FINISHING HAMMER

Light in weight and perfectly balanced. Has slightly crowned 1¼"-diameter round face, and a 1$\frac{1}{16}$" square face. Weight, .64 Lb. No. 1424H—Spare Handle.



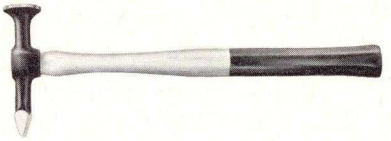
NO. 1425 FINISHING HAMMER

Heavier than 1424. Has slightly crowned 1½"-diameter round face, and a 1½" square face. Weight, .98 Lb. No. 1426H—Spare Handle.



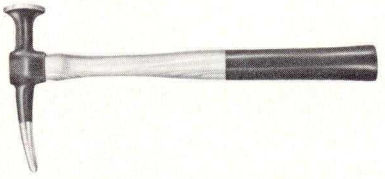
NO. 1426 LONG BODY FINISHING HAMMER

For crowned fenders and other places where clearance is needed. Has slightly crowned 1⅜"-diameter round face with 3½" clearance, and a round cross pein, 1⅛" wide, with 4" clearance. Weight, 1.03 Lbs. No. 1426H—Spare Handle.



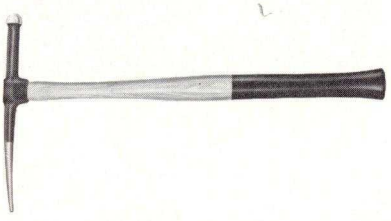
NO. 1427 FINISHING HAMMER

Has wedge shaped 1" wide cross pein with 2½" clearance. Used for fender beads, corner along panel beading. Has slightly crowned 1⅜" round face with clearance of 2". Weight, .70 Lb. No. 1424H—Spare Handle.



NO. 1428 PECKING HAMMER

Has pointed end for picking out small dents and a round face for finishing. Head is 5⅞" long overall. Slightly crowned round face is 1½" in diameter. Weight, .86 Lb. No. 1426H—Spare Handle.

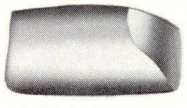


NO. 1429 PECKING HAMMER

Eliminates uncomfortable reaching. Handle, 17⅜", reaches to center of top. Head is 9" long overall. This hammer combines a long curved pecking point with a long-necked round pein. Weight, .88 Lb. No. 1429H—Spare Handle.

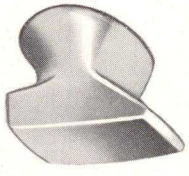
BODY AND FENDER TOOLS

All dollies are forged of alloy steel, hardened, tempered, highly polished on working surfaces, maintaining smooth surfaces over long periods of time, even with hard daily use.



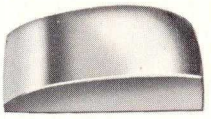
NO. 1452 EGG-SHAPED DOLLY

A very useful and popular shape, with a great many different curves and angles. Size, 1⅝" x 2½" x 3¾". Weight, 3.1 Lbs.



NO. 1453 RAILROAD OR GENERAL PURPOSE DOLLY

Has a large variety of radii, perfect hand fit, thin beading edge, and 7½ square inches on largest face. Heavy weight is ideal for bumping out dents. Size, 2$\frac{29}{64}$" x 2⅞" x 2$\frac{51}{64}$". Weight, 3.0 Lbs.



NO. 1454 RADIUS DOLLY

Useful design, with many radii. One side and bottom are flat for dinging flat surfaces. Both ends high crowned. Size, 1$\frac{9}{32}$" x 2$\frac{3}{16}$" x 4½". Weight, 2.85 Lbs.

NO. 1455 BEAD DOLLY

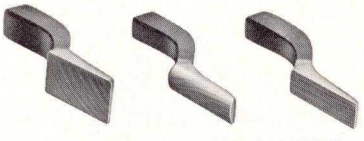
Another popular dolly, used for beads or flanges on fenders. Flat side works under long curve of fender. Thin edge is useful for corners and beading. Size, 1⅞" x 2$\frac{29}{32}$" x 4$\frac{7}{16}$". Weight, 2.64 Lbs.

NO. 1457 SHRINKING DOLLY

The unique shape and low crown make this dolly ideal for shrinking body metal, and for raising beads and molding. Size, 1¼" x 3$\frac{1}{16}$" x 3$\frac{5}{16}$". Weight, 2.4 Lbs.

NO. 1458 SEMI-ELLIPTICAL HEEL DOLLY

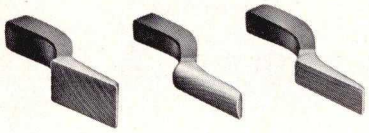
Provides two flat and two crowned working surfaces. Very useful in restricted places. Suitable for shrinking metal. Size, 1$\frac{3}{16}$" x 2⅜" x 3¼". Weight, 2.0 Lbs.



WOOD PADDLES FOR MAKING SOLDER FILLS

Three differently shaped and specially designed paddles. The select kiln-dried hardwood used is highly resistant to charring, and it is treated by a special process to provide the peculiar qualities necessary for the smooth spreading of solder.

NO.	WORKING AREA	LGTH.	WT., LBS.
1411	Flat, 1"x3¼"	7¾"	.12
1412	Curved, 1$\frac{1}{16}$"x3¼"	7¾"	.11
1413	Flat, 1$\frac{1}{16}$"x3¼"	7¾"	.12



NO. 1400SP SOLDER PADDLE SET

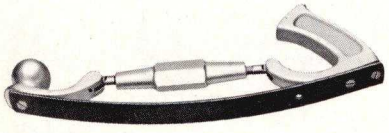
Includes the solder paddles listed in previous column—Nos. 1411, 1412 and 1413. In metal edge box. Weight .38 Lb.

NO. 1501 FLEXIBLE FLAT STRAIGHT FILE

Fast cutting type for all kinds of body, fender and sheet metal work. Has curved teeth on both sides. 7 teeth to inch. Use with 1509 Holder. Length, 14". Width, $1\frac{11}{32}$". Weight, .70 Lb.

NO. 1502 FLEXIBLE FLAT STRAIGHT FILE FOR SOFT MATERIALS

For use on soft materials such as plastic body filler, fibreglas and plexiglas. Milled curved teeth on both sides. 14" long x $1\frac{11}{32}$" wide, weight, .7 lbs. Six teeth per inch.



NO. 1509 ADJUSTABLE FILE HOLDER

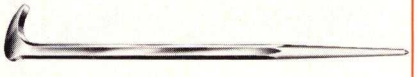
Made of aluminum, this fender file holder is light but strong. Simple adjustment makes file convex, concave or flat. For use with 1501 File. Length, 14". Weight, 1.94 Lbs.

BARS

CONVENTIONAL-TYPE PRY BARS

For countless prying and aligning jobs. Forged from special alloy steel and correctly heat treated for extra strength.

NO.	STOCK	LENGTH	WT., LBS.
2116	$\frac{1}{2}$" Hexagon	16"	.72
2120	$\frac{19}{32}$" Hexagon	18"	1.20
2124	$\frac{23}{32}$" Hexagon	24"	2.45
2125	$\frac{7}{8}$" Hexagon	$29\frac{3}{4}$"	4.70



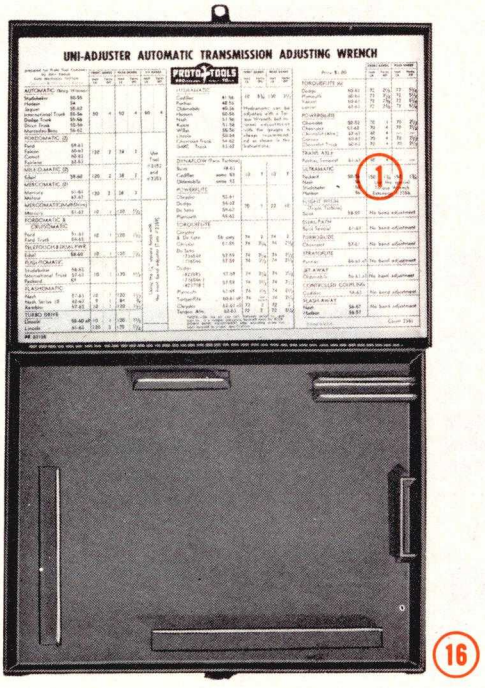
Fedl. Description: "Pry bar (rolling head.)" Specs. (No. 2126): GGG-B-101b. Type IV.

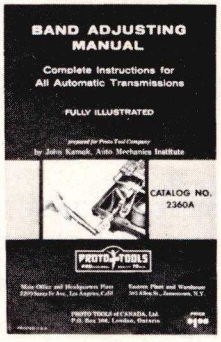
ROLL HEAD BARS

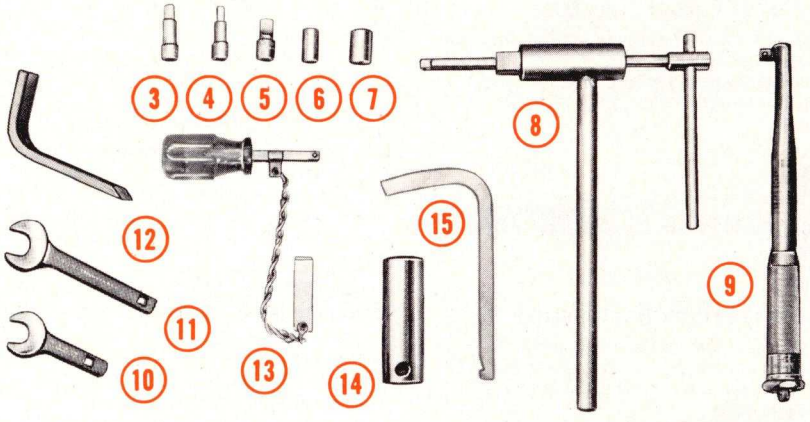
New type gear bar, with 90° rolling head. One of the handiest types of bars you can own, having a great many uses. Especially valuable for getting into close places, such as behind gears. Forged from alloy steel.

NO.	STOCK	LENGTH	WT., LBS.
2126	$\frac{1}{2}$" Hexagon	16"	.88
2130	$\frac{19}{32}$" Hexagon	18"	1.54

BAND ADJUSTING SET / NO. 2350A







Proto's universal band adjusting set has all the special tools needed to adjust bands on all automatic transmissions for autos and light trucks. For first-time-users a handy manual describes band adjusting procedure in easy-to-understand terms. It is illustrated. It describes procedures step-by-step. On the inside cover of the metal case, a copyrighted reference chart with correct band adjusting specifications covers all U.S. automatic transmissions.

NOTE: If new transmissions are developed in the future, Proto will make whatever tool is necessary for proper band adjustment AVAILABLE FOR YOUR USE.

Tools may be purchased separately.

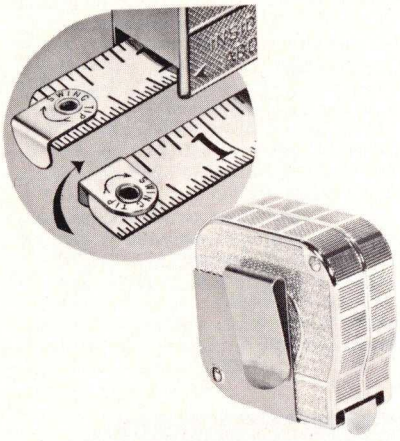
REF. NO.	PART NO.	DESCRIPTION
1	2361	Uni-Adjuster Chart
2	2360	Band Adjusting Manual
3	4742	Hollow Head Socket, $\frac{1}{4}$" Hex Bit, $\frac{1}{4}$" dr.
4	4741	Hollow Head Socket, $\frac{7}{32}$" Hex Bit, $\frac{1}{4}$" dr.
5	4743	Screwdriver Socket, $\frac{3}{8}$" Bit, $\frac{1}{4}$" dr.
6	4710	Socket, 6 pt., $\frac{5}{16}$" op., $\frac{1}{4}$" dr.
7	4710S	Socket, 8 pt., $\frac{5}{16}$" op., $\frac{1}{4}$" dr.
8	2357	Band Adjuster
9	6061	Torque Wrench, $\frac{1}{4}$" dr., 150 In-Lbs.
10	2352	$\frac{9}{16}$" O.E. Torque Wrench Ext.
11	2356	$\frac{5}{8}$" O.E. Torque Wrench Ext.
12	2353	$\frac{1}{4}$" Gauge
13	2359	Handle and $\frac{1}{4}$" Gauge, $\frac{1}{4}$" dr.
14	5324	Dp. Socket, 12 pt., $\frac{3}{4}$" op., $\frac{1}{2}$" dr.
15	2355	Servo Gauge—Rear
16	9973	Metal Case

Wt., 7.22 lbs.

STEEL TAPES

STEEL MEASURING TAPES FOR EVERY NEED!

Available with inch graduations and combination inch and metric graduations.



Handy swing tip for easier, more accurate inside measurements. Sturdy rigid blade for vertical one man measurements. Chrome plated metal case for rugged usage. Handy belt clip on most models. High carbon spring tempered steel for maximum strength and flexibility. Large easy-to-read black Bright Size® markings on chip-peel-crack resistant white baked-on enamel finish. Quick, on-the-spot blade replacement.

Select from an excellent range of sizes and types! Pocket, intermediate and power tapes to meet every requirement in standard tape measurement. Every Proto tape is manufactured from high grade carbon steel to assure long life!

NO. 1550-51-52 ¼ IN. WIDE TAPES

Mighty midget. Designed for flat, no-bulge carrying in pocket or purse. Sturdy chrome plated case; swing tip. Case 1⅝ in. square with stand-up base. Blade graduated in black in 16ths and in 32nds for first 6 in. of one edge; in 4ths and 8ths on other edge.

NO.	LENGTH FT.	WT. EACH, LBS.		WT. CARTON, LBS.
1550	6′	.14		1.54
1551	8′	.16		1.70
1552	10′	.17		1.80
NO.	**REPLACEMENT BLADES**	**WEIGHT REPLACEMENT**		**REPLACEMENT SPRINGS**
		BL.	SPR.	
1550	1550-B	.02	.03	1550-S
1551	1551-B	.03	.03	1551-S
1552	1552-B	.04	.04	1552-S

NO. 1555-56-57 ½ IN. WIDE TAPES

Sturdy chrome plated die cast case; two assembly screws. Stand-up base. Blade graduated in black in 16ths. Stud marks every 16 inches.

NO.	LENGTH FT.	WT. EACH, LBS.		WT. CARTON, LBS.
1555	8′	.32		3.40
1556	10′	.33		3.54
1557	12′	.35		3.74
NO.	**REPLACEMENT BLADES**	**WEIGHT REPLACEMENT**		**REPLACEMENT SPRINGS**
		BL.	SPR.	
1555	1555-B	.07	.05	1555-S
1556	1556-B	.08	.06	1556-S
1557	1557-B	.11	.07	1557-S

Above Tapes have belt clips.

NO. 1560 ½ IN. WIDE ENGINEERS TAPES

Sturdy chrome plated die cast case; two assembly screws. Stand-up base, plus engineer's markings. Blade graduated in black in 10ths and 100ths of feet.

NO.	LENGTH FT.	WT. EACH, LBS.		WT. CARTON, LBS.
1560	10′	.32		3.38
NO.	**REPLACEMENT BLADES**	**WEIGHT REPLACEMENT**		**REPLACEMENT SPRINGS**
		BL.	SPR.	
1560	1560-B	.09	.06	1556-S

NO. 1565-66 ½ IN. WIDE COMBINATION METRIC & INCH TAPES

Blades graduated on lower edge in metric measure, upper edge in 16ths of inches.

NO.	LENGTH FT.	WT. EACH, LBS.		WT. CARTON, LBS.
1565	6′	.27		2.86
1566	8′	.29		3.10
NO.	**REPLACEMENT BLADES**	**WEIGHT REPLACEMENT**		**REPLACEMENT SPRINGS**
		BL.	SPR.	
1565	1565-B	.06	.04	1565-S
1566	1566-B	.08	.05	1555-S

NO. 1569-70-71 ¾ IN. WIDE TAPES

Permits one-man vertical measurements. Swing tip; quick blade change; sturdy chrome plated, light weight die cast case; stand-up base. Blade graduated in black in 16ths on both edges; stud markings every 16 in.

NO.	LENGTH FT.	WT. EACH, LBS.		WT. CARTON, LBS.
1569	10′	.44		4.62
1570	12′	.46		5.06
1571	16′	.57		5.90
NO.	**REPLACEMENT BLADES**	**WEIGHT REPLACEMENT**		**REPLACEMENT SPRINGS**
		BL.	SPR.	
1569	1569-B	.13	.07	1569-S
1570	1570-B	.16	.08	1570-S
1571	1571-B	.20	.11	1571-S

Above Tapes have belt clips.

NO. 1575-76 ½ IN. WIDE POWER TAPES
NO. 1580-81 ¾ IN. WIDE POWER TAPES

Clean mechanical design; double fulcrum spring control; case opens and reassembles without losing parts. Blade replaced without opening case. Chrome plated case.

Turn page for specifications

STEEL TAPES

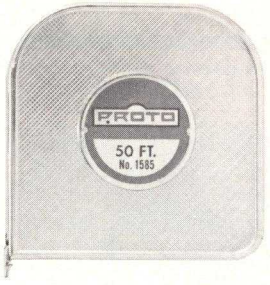
NOS. 1575-76 AND NOS. 1580-81 POWER TAPES

NO.	LENGTH FT.	WT. EACH, LBS.	WT. CARTON, LBS.
1575	10′	.44	4.70
1576	12′	.46	4.70
1580	10′	.53	5.75
1581	12′	.60	6.25

NO.	REPLACEMENT BLADES	WEIGHT REPLACEMENT BL.	WEIGHT REPLACEMENT SPR.	REPLACEMENT SPRINGS
*1575	1556-B	.08	.10	1575-S
1576	1557-B	.11	.12	1576-S
1580	1569-B	.13	.10	1580-S
1581	1570-B	.16	.12	1581-S

Above Tapes have belt clips.

*No 1575 Blade graduated in black in 16ths on both edges of one side. With 32nds 1st 6 in. one edge.



NO. 1585-86 ⅜ IN. WIDE CONTRACTORS, BUILDERS, PLUMBERS TAPES

A heavy-duty steel tape that operates easily and lasts for years. Tempered tool steel end hook has nail hole at zero mark. Crank folds flush into case when not in use. Anti-backlash. Sturdy non-scuff, die cast chrome finish "take-apart" case makes blade replacement easy. Square stand-up base. Blade graduated in black in 8ths on both edges, stud markings every 16 in.

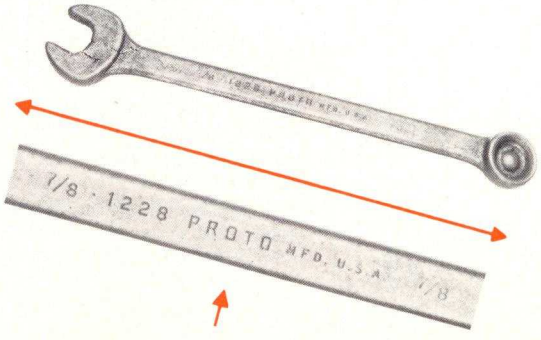
NO.	LENGTH FT.	WT. EACH, LBS.	WT. CARTON, LBS.
1585	50′	.97	2.00
1586	100′	1.75	3.60

NO.	REPLACEMENT BLADES	WEIGHT REPLACEMENT BLADES, LBS.	REPLACEMENT SPRINGS
1585	1585-B	.56	None req.
1586	1586-B	1.03	None req.

NO. 1550-1 STEEL TAPE MERCHANDISER

MERCHANDISER CONTENTS

NO.	DESCRIPTION
1550	2 ¼″ wide, 6′ long
1551	2 ¼″ wide, 8′ long
1552	2 ¼″ wide, 10′ long
1555	1 ½″ wide, 8′ long w/belt clip
1556	1 ½″ wide, 10′ long w/belt clip
1557	2 ½″ wide, 12′ long w/belt clip
1569	1 ¾″ wide, 10′ long w/belt clip
1570	2 ¾″ wide, 12′ long w/belt clip
1571	2 ¾″ wide, 16′ long w/belt clip
1575	1 ½″ wide power, 10′ long w/clip
1576	1 ½″ wide power, 12′ long w/clip
1580	1 ¾″ wide power, 10′ long w/clip
1581	2 ¾″ wide power, 12′ long w/clip
	1 Proto Merchandiser (Size: 15″ wide x 17½″ high)



HOW QUALITY IS BUILT INTO PROTO TOOLS

7. STRAIGHTEN & MARK.

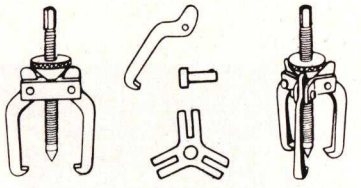
Powerful hydraulic machines straighten the wrench shanks and at the same time impress the size, catalog number, brand name, and U.S.A. on the wrench.

PULLERS / PULLER PARTS AND SETS

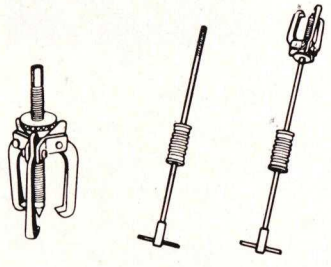
Fedl. Specs.: GGG-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

PULLERS

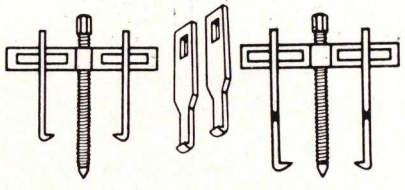
You can do more jobs with less Proto puller parts. Many puller lines require an enormous investment in special pullers for all different types of jobs. Proto pullers have interchangeable parts. You do all jobs, with fewer parts, for less cost. For example, a light-duty two-jaw puller can be converted into a three-jaw type by adding a three-way yoke, pin and jaw. A two-jaw or three-jaw light-duty puller can be quickly changed to a slide-hammer type by replacing the screw with a T-handled rod and hammer. Likewise, the slide-hammer puller can be converted to a light-duty type by adding one screw. This same screw is used in PROTO medium-duty pullers, so a light-duty puller can be changed to a medium-duty type by adding a crossarm and two jaws. Regular heavy-duty jaws can be replaced by cap screw or timing gear jaws. All of these jaws are for inside or outside pulling.



Two-Jaw Puller + Jaw, Pin and Three-Way Yoke = Three-Jaw Puller



Three-Jaw Puller + Rod and Hammer = Slide-Hammer Puller



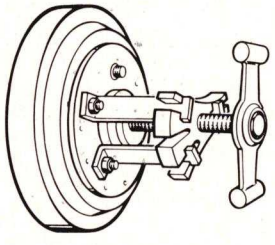
Standard Jaw Puller + Timing Gear Jaws = Timing Gear Puller

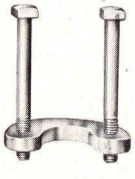
UNIVERSAL WHEEL HUB PULLERS

SET NO. 4001G/with Striking Wrench Attachment

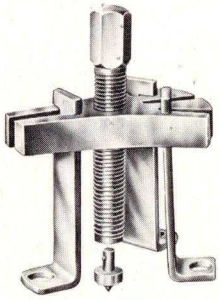
The simplest and fastest tool for hubs and many other pulling requirements. It pulls hubs off most light trucks and cars. The No. 4001J legs are drilled for 9/16" studs and are quickly adjustable to any drum with 3, 4, 5, 6 or 7 studs in a circle up to 6½" diameter. The No. 4001JT legs accommodate larger ¾" studs and are adjustable on drums in a circle up to 8" diameter. The fastest, easiest manual wheel puller made for hubs without flanges on all Chryslers and many other cars and light trucks.

PULLING A WHEEL HUB





Adapter ring 4001R and two 4001C cap screws permit pulling hubs of 1948 and older Fords.



Assembly of 4001S Screw, 4001B Body, three 4001J Legs, and 4001W Striking Wrench. Detachable Tip 4001ST keeps screw on center, reduces spreading or splitting of axles.

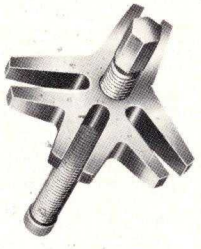
All Puller Parts are made from special alloy steel.

WHEEL HUB PULLER PARTS/SETS

NO.	DESCRIPTION	WT., LBS.
4001B	Puller Body, 6¾" long	3.60
4001S	1" Puller Screw, 7⅞" long, with 4001ST Tip	1.62
4001ST	Detachable Tip for 4001S Screw	.06
4001J	Leg—1 5/16" leg offset to clear hubs, 3⅞" from crossarm to offset	1.00
4001JT	Leg—1¾" leg offset to clear hubs, 3⅞" from crossarm to offset	1.00
4001R	Older Ford Adapter Ring	.64
4001C	Older Ford Adapter Cap Screw, 4½" long	.38
4001W	Striking Wrench	1.90
4001T	Steel Box, 10¾" x 8¼" x 1¾"	2.88

	PARTS IN SET		
NO.	4001	4001F	4001G
4001B	1	1	1
4001S	1	1	1
4001ST			
4001J	3	3	3
4001JT			
4001R	1		
4001C	2		
4001W		1	1
4001T			1

Set Weight, Lbs.
No. 4001—9.80
No. 4001F—10.24
No. 4001G—13.00



NO. 4005 HARMONIC BALANCER PULLER/2-WAY/3-WAY

For late model cars with 2 or 3 tapped holes on harmonic balances, timing gears. Valuable for many other pulling jobs. Bolt circle range of 5". Detachable tip does not rotate, eliminating shaft damage. ⅝" turning hex gives tremendous leverage. Forged alloy steel body and heat treated screw make a tough, heavy-duty tool.

NO.	DESCRIPTION	WT., LBS.
4005B	Body	1.26
4005S	Screw	.40
4022T	Tip for 4005S Screw	.03
4028	Cap Screw ⅜" - 16 x 3" (2)	.10
4005C	Cap Screw ⅜" - 24 x 3" (2)	.10

Weight, 3.0 Lbs.

Fedl. Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin 5918.

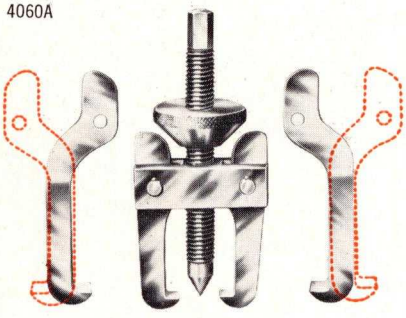
LIGHT DUTY PULLERS

These small pullers are designed to pull little gears, pulleys, bearings, etc., quickly and easily. The narrow jaws get into very close places. Adjusting nut No. 4063 holds the jaws firmly in position so they can't slip. If adjusting nut No. 4056N is substituted, the short jaws can be reversed and used for inside pulling. Two two-way and two three-way puller sets are available. Parts included in these sets are shown in the columns of the table below.

All jaws that can be used with Light-Duty Pullers are illustrated on page 37.

4070C
3-WAY PULLER

4060A



LIGHT DUTY PULLER PARTS AND SETS

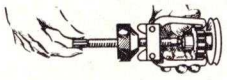
NO.	DESCRIPTION	WT., LBS.
4022	Screw, 6 5/16" long, 9/16" hex. head, with 4022T Tip	.35
4022T	Standard Detachable Tip for 4022 Screw, 60° taper	.03
4022TS	Small Detachable Tip for 4022 Screw, 1/4" diameter	.02
4063	Knurled Non-Reversible Adjusting Nut, 1 3/4" diam.	.28
4056N	Knurled Reversible Adjusting Nut, 2 1/2" diameter	.75
4061	Yoke, 2 1/2" wide, for holding two jaws	.23
4071	Yoke, 2 1/2" diameter, for holding three jaws	.32
4056PN	Pin for holding jaw in yoke, held in place by ball check	.03
4056J	Reversible Jaw, 3 9/16" long, 2" yoke to hook, 1 1/4" - 3 3/4" inside range, 0 - 3" outside range	.11
4066	Outside Jaw, 4 19/32" long, 3" yoke to hook, 0"-5 3/16" range	.21
4067	Long Outside Jaw, 7 3/4" lg., 6 1/8" yoke to hook, 0-6 7/8" range	.31

NOS. 4060A, 4060E, 4070C, 4070E SETS

NO.	2-WAY SETS		3-WAY SETS	
	4060A PARTS	4060E PARTS	4070C PARTS	4070E PARTS
4022	1	1	1	1
4063	1	1	1	1
4061	1	1	—	—
4071	—	—	1	1
4056PN	2	2	3	3
4056J	2	2	—	—
4066	2	—	3	—
4067	—	2	—	3

Set Weight, Lbs.
No. 4060A—1.75
No. 4060E—2.42
No. 4070C—1.94
No. 4070E—2.42

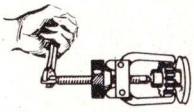
HOW TO USE A LIGHT DUTY PULLER



Hold jaws in place and turn screw down snugly.

Tighten adjusting nut against jaws.

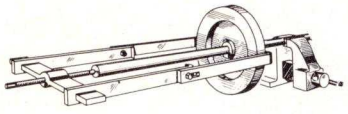
Strike end of screw sharply with hammer to break assembly loose.



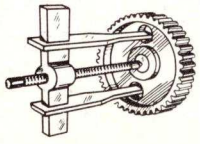
Turn down screw with open end wrench.

MEDIUM AND HEAVY DUTY PULLERS

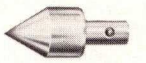
Provide straight line pulling for all types of bearings, sprockets, gears, pulleys, wheels, hubs, etc. Springs hold quick-change jaws securely on crossarm, which is marked to show the inches jaws are apart. With no linkage or pins to adjust, they are easy to set up. Five jaws have holes for bolting together and extending reach.



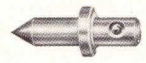
Bolting together regular PROTO jaws makes it possible to pull bearings and gears from long shafting without buying expensive long jaws.



Use of narrow jaws on gear with cut-out sections.



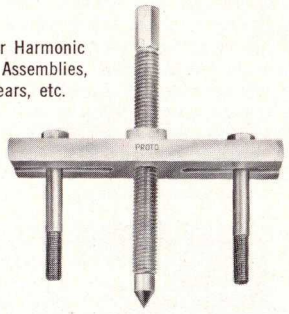
4022T



4022TS

Detachable "live center" screw tips do not rotate when a screw is turned. Prevents shaft damage, keeps screw on center, relieves screw strain and retains better alignment.

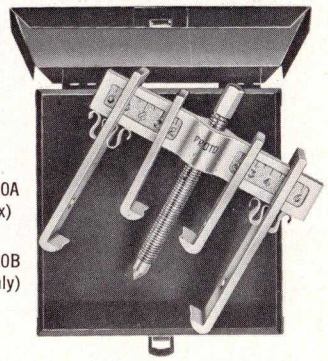
4020C For Harmonic Balancer Assemblies, Timing Gears, etc.



4020C

†SET 4020A (With Box)

†SET 4020B (Tools Only)



†Only 2 springs (4021S) with these sets.

MEDIUM DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.
4021	Crossarm, 7" long with jaw-positioning guide	1.00
4021S	Spring for jaws 4025, 4026 and 4027	.01
4056C	Crossarm, 6" long for 4020C	1.10
4022	Screw, 6 5/16" long, 9/16" hex. head, with 4022T Tip	.35
4022T	Standard Detachable Tip for 4022 Screw, 60° taper	.03
4022TS	Small Detachable Tip for 4022 Screw, 1/4" diameter	.02
*4025	Jaw, 2" from crossarm to hook	.33
*4026	Jaw, 4" from crossarm to hook	.50
4027	Narrow Jaw, 4" from crossarm to hook	.35
4028	Cap Screw, case hardened, 3" long for 4020C	.10
4029	Steel Box, 7"x7"x1 1/4"	1.66

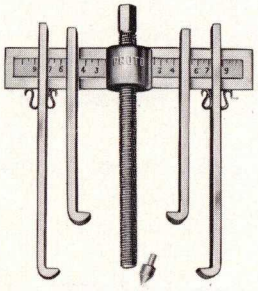
**Has extra hole near hook for bolting jaws together, which saves buying expensive long-reach jaws.*

PROTO PROfessional TOols

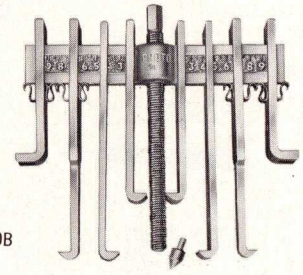
MEDIUM DUTY PULLER PARTS AND SETS (Cont.)

NO.	PARTS IN SET 4020A	PARTS IN SET 4020B	PARTS IN SET 4020C
4021	1	1	—
4021S	2	2	—
4056C	—	—	1
4022	1	1	1
*4025	2	2	—
*4026	2	2	—
4028	—	—	2
4029	1	—	—

Set Weight, Lbs.
No. 4020A—5.00
No. 4020B—3.20
No. 4020C—1.76



4010B



4030B

4010B has 2 springs (4011S).
4030B has 4 springs (4011S).

HEAVY DUTY PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.
4011	Crossarm, 11" long, with jaw-positioning guide	2.66
4011S	Spring for Jaws 4015, 4016, 4017 and 4018	.02
4012	Screw, 11 13/16" long, 3/4" hexagon head with 4012T Tip	1.20
*4012T	Standard Detachable Tip for 4012 Screw, 60° taper	.06
*4015	Jaw, 4 11/16" from crossarm to hook	.94
*4016	Jaw, 7 1/8" from crossarm to hook	1.26
4017	Timing Gear Jaw, 7 3/16" from crossarm to hook	1.14
*4018	Cap Screw Jaw, 2 15/16" from crossarm to hook	.88
4019	Steel Box, 11 1/8" x 11 3/4" x 1 3/4"	3.68

Has extra hole near hook for bolting jaws together, which saves buying expensive long-reach jaws.

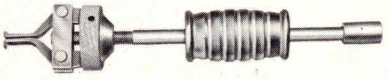
NO.	PARTS IN SET 4010B	PARTS IN SET 4010C	PARTS IN SET 4030A	PARTS IN SET 4030B
4011	1	1	1	1
4011S	2	2	4	4
4012	1	1	1	1
*4015	2	2	2	2
*4016	2		2	2
4017			2	2
*4018		2	2	2
4019			1	

Set Weight, Lbs.
No. 4010B—8.50
No. 4010C—7.66
No. 4030A—15.90
No. 4030B—12.60

Federal Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

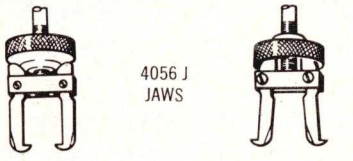
SLIDE HAMMER PULLERS

The PROTO No. 4056 slide-hammer puller is an essential pulling unit in every shop or plant where bearings, grease retainers, oil seals, sleeves and shafting must be removed. The jaws and adjusting nut are reversible, so the set can be used for either inside or outside pulling.

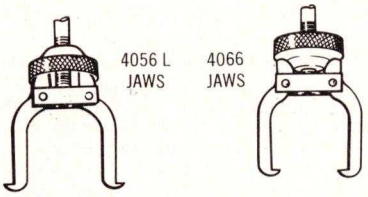


No. 4056A Pilot Bearing Puller, for 5/8"-1 3/4" Bearings

NO. 4061 JAW COMBINATIONS WITH 2-WAY YOKE



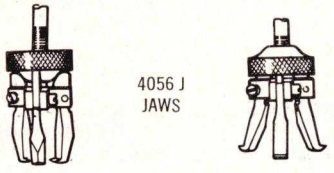
4056 J JAWS



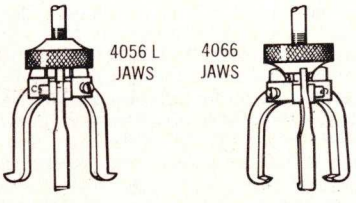
4056 L JAWS

4066 JAWS

NO. 4071 JAW COMBINATIONS WITH 3-WAY YOKE



4056 J JAWS



4056 L JAWS

4066 JAWS

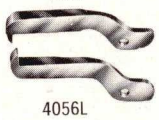
All Puller Parts are made from special alloy steel.

4056J

4057J

4067

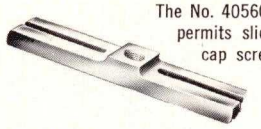
4066

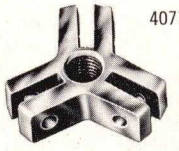


4056L

4058J

The No. 4056C crossarm permits slide-hammer cap screw pulling.





4071

4061

With the addition of a No. 4061 yoke, No. 4056 can be converted to a two-jaw puller.

Using 4056S single jaw and 4056RS short rod to pull grease retainers with 3/4" center hole.

SLIDE HAMMER PULLER PARTS AND SETS

NO.	DESCRIPTION	WT., LBS.
*4056R	T-Handled Rod, 24" long	1.90
*4056RS	Short Rod, 12 3/8" long, for close places and for assembling valve or Blind Bearing Puller	.96
*4056H	Sliding Hammer with fluted grip	2.72
*4056N	Knurled Reversible Adjusting Nut, 2 1/2" diam.	.75
4063	Knurled Non-Reversible Adjusting Nut, 1 3/4" diam.	.28
4061	Yoke, 2 1/2" wide, for holding two jaws	.23
4071	Yoke, 2 1/2" diameter, for holding three jaws	.32
*4056PN	Pin for holding jaw in yoke	.03
4056C	Slotted Cap Screw Pulling Crossarm, 6" wide	1.10
4056J	Reversible Jaw, 3 5/16" long, 2" yoke to hook, 1 1/4" - 3 3/4" inside and 0 - 3" outside ranges	.11
4057J	Long Reversible Jaw, 4 7/8" long, 3 5/16" yoke to hook, 1 1/4" - 2 7/8" inside and 0 - 5 1/8" outside ranges	.18

(Continued on Page 38)

PROTO PROFESSIONAL TOOLS

SLIDE HAMMER PULLER PARTS AND SETS (Cont.)

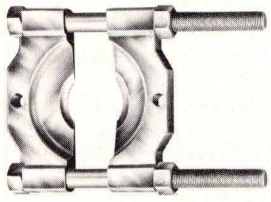
NO.	DESCRIPTION	WT., LBS.
4058J	Inside Jaw, 3¼" l., 1 47/64" yoke to hook ⅝"-1⅝" range	.10
4056L	Inside Jaw, 4⅝" l., 3" yoke to hook 1⅝"-6" range	.21
4066	Outside Jaw, 4 19/32" l., 3" yoke to hook 0 - 5 3/16" range	.21
4067	Long Outside Jaw, 7¾" l., 6⅛" yoke to hook 0"-6⅞" range	.31
4056S	Single Jaw, 2 15/16" l.,for wheel alignment, brakes, pulling grease retainers, small bearings, etc.	.17

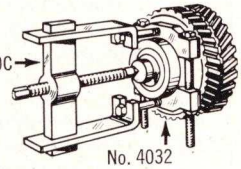
NO.	SET 4056 PARTS	SET 4056A PARTS	SET 4056B PARTS
4056R	1	—	1
4056RS	—	1	—
4056H	1	1	1
4056N	1	1	1
4063	—	—	—
4061	—	1	1
4071	1	—	1
4056PN	3	2	3
4056C	—	—	1
4056J	3	—	3
4057J	—	—	3
4058J	—	2	3
4056L	—	—	3
4066	—	—	3
4067	—	—	3
4056S	—	—	1

Set Weight, Lbs.
No. 4056—6.5
No. 4056A—4.9
No. 4056B—11.50

Fedl. Specs.: GGG-P-781b. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

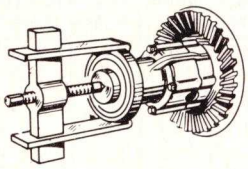
SEPARATOR-PULLER AND STEP PLATES

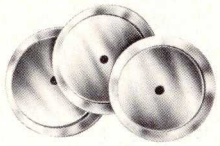




NO. 4032 BEARING SEPARATOR AND PULLER ATTACHMENT

Flat surfaces, thin edges permit adjustment behind many gears, bearings, etc., where space is too limited for puller hooks. Protects expensive bearings. Overall width, 5 13/16". Max. opening, 4" x 4 7/16". Wt., 4.4 Lbs. Parts: Top Plate—4032A. Bottom Plate—4032B. Bolt and Nut—4032S. Top and bottom holes are ½-13 thread. It is also ideal as an arbor press bed plate.





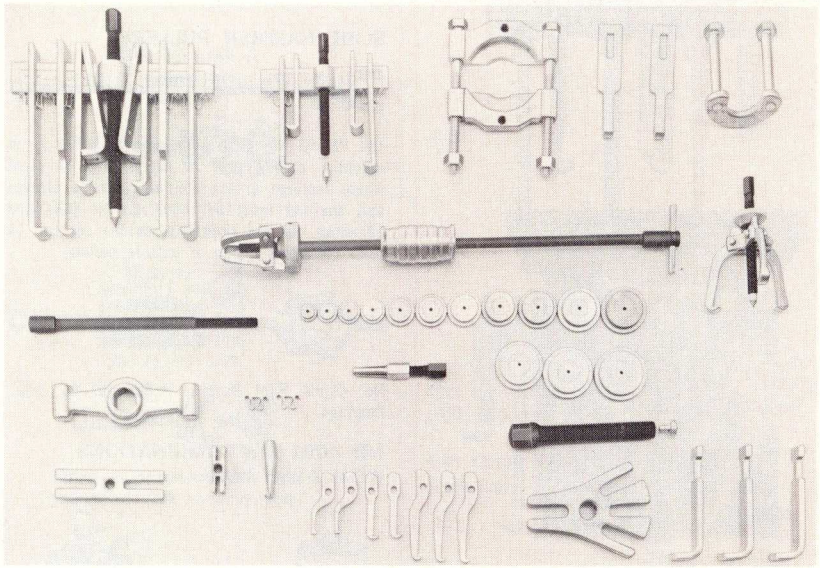
STEP PLATE ADAPTERS

Used on hollow shafting or housings as base for puller screw to force off bushings, gears, etc., also for installing oil seals.

NO. 4040 SET

Eleven sizes Step Plates, 4040-1 to 4040-11. Wt., 3.0 Lbs.

NO.	SMALL DIAMETER	LARGE DIAMETER	WT., LBS.
4040-1	¾"	1"	.05
4040-2	⅞"	1⅛"	.08
4040-3	1"	1¼"	.10
4040-4	1⅛"	1⅜"	.13
4040-5	1¼"	1⅝"	.19
4040-6	1⅜"	1¾"	.22
4040-7	1½"	1⅞"	.28
4040-8	1⅝"	2"	.33
4040-9	1¾"	2⅛"	.40
4040-10	1⅞"	2⅜"	.49
4040-11	2"	2½"	.59
4040-12	2⅛"	2⅝"	.65
4040-13	2¼"	2¾"	.76
4040-14	2⅜"	2⅞"	.83



No. 4030B Puller Set has 4 springs only. *No. 4020B Puller set has only 2 springs.*

NO. 4000AB MASTER PULLER SET

Ideal for vehicle and equipment repair shops, maintenance departments in many industries. Makes many of puller set-ups, due to parts interchangeability. Weight, 52 Lbs.

CONTENTS/NO. 4000AB SET

NO.	QUANTITY	DESCRIPTION
4030B	1	Heavy-Duty Puller
4020B	1	Medium-Duty Puller
4056	1	Slide-Hammer Puller
4070C	1	Light-Duty Puller
4056J	2	Reversible 3½" Jaw
4061	1	Yoke for two jaws
4001	1	Universal Wheel Puller
4001W	1	Striking Wrench
4032	1	Bearing Separator
4040	1	Step Plate Adapter Set

NO.	QUANTITY	DESCRIPTION
4040-12	1	Step Plate Adapter
4040-13	1	Step Plate Adapter
4040-14	1	Step Plate Adapter
4027	2	Narrow Jaw
4056C	1	Cap Screw Crossarm
4056RS	1	Short Puller Rod
4056S	1	Single Puller Jaw
4057J	3	Reversible 4⅝" Jaw
4058J	2	Pilot Bearing Jaw
4080	1	Blind Bearing Puller

IMPORTANT SAFETY RULES FOR HAND TOOL USE

Hand tools, although commonly used, are specialized for particular jobs. Always use the right size and type of tool for the job being done. Keep tools in proper working condition.

"Mushroomed" heads of chisels and punches may chip and cause injury.

Screwdriver blades are made to turn screws; they should never be used for other purposes. Worn blades may slip and cause injury.

Only power drive sockets should be used on pneumatic or electric impact wrenches.

All wrenches are designed to a specific size-length-strength ratio. The use of a "cheater" or any other means for increased leverage is hazardous. Keep hammer heads tightened on handle. Do not strike one hammer with another hammer.

Eye protection, through use of safety glasses or hood, is recommended for any job involving the use of tools; particularly when using punches, chisels and drills.

Use hand tools only for their designed purposes and within their size range.

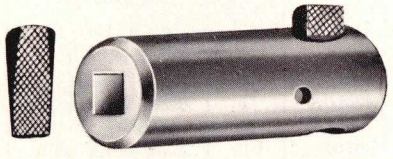
Proto Tool Company cannot be responsible for injury or damage caused by tools improperly used; or from tools which have been abused or badly worn.

SPECIAL PURPOSE PULLERS

Fedl. Description: "Stud Remover and Setter, Wedge." Specs.: GGG-S-775a, Type IV. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

SPECIAL PURPOSE PULLERS
MANUAL STUD REMOVERS AND SETTERS

Wedge type removers and setters are superior to eccentric roller type, give long service, handle very short studs (¾" for No. 4515), have small turning radius which clears obstructions that would block operation of other types. Tapered, deeply-serrated wedges grip tighter as pressure is applied and take firm hold on stubborn studs. Each unit has two wedges to increase usable range. Spring-tensioned pin holds wedges in body when not in use.

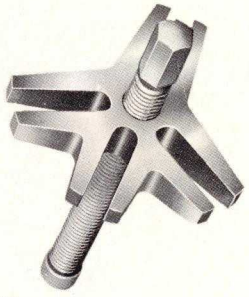


STANDARD ½" SQUARE DRIVE

NO.	DESCRIPTION	FOR STUDS	DIAMETER	LENGTH	WT., LBS.
4515	Stud Remover Set	¼" - ⅝"	1 3/16"	3½"	.78
4516	Thick Wedge Only	¼" - 7/16"		1 3/16"	.07
4517	Thin Wedge Only	½" - ⅝"		1 3/16"	.04

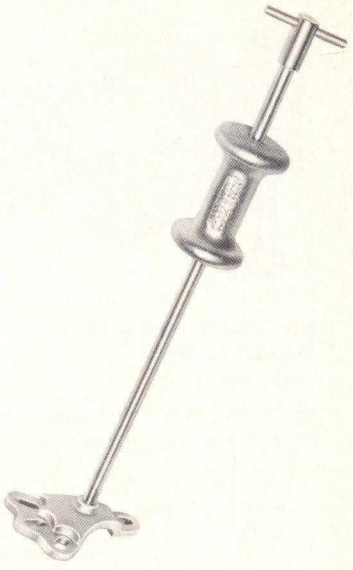
HEAVY DUTY ¾" SQUARE DRIVE

NO.	DESCRIPTION	FOR STUDS	DIAMETER	LENGTH	WT., LBS.
4532	Stud Remover Set	⅝" - 1"	2"	5⅛"	3.38
4533	Thick Wedge Only	⅝" - ¾"		1⅞"	.34
4534	Thin Wedge Only	¾" - 1"		1⅞"	.19



NO. 4043
STEERING WHEEL PULLER

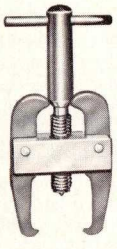
Removes drilled and tapped steering wheels, and ideal for many other cap screw pulling jobs. Holds two diametrically opposed cap screws, or three screws 120° apart. Rotatable screw tip is slotted to prevent interference with horn button wiring. Weight, 1.20 Lbs. No. 4043B—Spare Body. No. 4043S—Spare Screw with Tip. No. 4043T—Spare Tip.



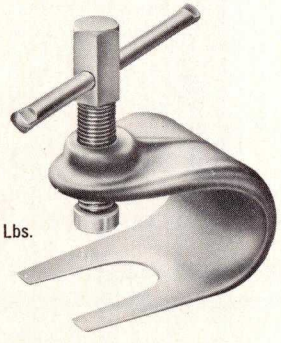
NO. 4055 REAR AXLE HAMMER PULLER SET

Husky 5⅓ lb. hammer removes stubborn axles. Alloy steel 4-slot adapter fits four, five, or six-bolt or stud, 5½" circle range, on flange-type axles. Slide hammer is heavy-duty malleable iron. Flange adapter body and T-rod are forged alloy steel. All parts nickel chrome finished.
A must to repair worn bearings, leaking oil seals and rear end damage when rear axle must be removed. Wt., 9.00 Lbs. Length 25".

NO.	DESCRIPTION	WT., LBS.
†4055B	Puller Body	1.90
4055H	Sliding Hammer	5.30
4055R	T-Handle Rod	2.36



4041
WT., .65 Lbs.



4042
WT., .42 Lbs.

NOS. 4041 AND 4042
BATTERY TERMINAL AND BEARING PULLERS

Remove terminals quickly, easily, without damaging posts. No. 4041, conventional type, is used for small bearings and other jobs. No. 4042, unusual type, costs less and is faster to set up and use.

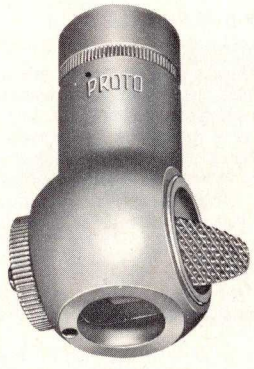
NO. 4054
AUTO BODY DENT PULLER

Proto's new 4054 Auto Body Dent Puller removes body dents **without requiring removal** of body panels or upholstery. You need this basic dent puller for lighter blows on all dented panels. Sheet metal screw fits drilled hole within dented area. Series of light blows with slide hammer pulls dent outward. The same procedure may be used to remove oil seals. Length, 18 inches. Weight, 2 Lbs., 12.5 ozs. Packed 1 per box.

No. 4054C—Knurled chuck
No. 4054H—Heavy knurled slide hammer
No. 4054R—Large plastic handle

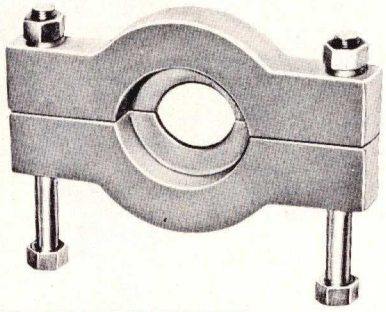
NO. 4080
BLIND BEARING PULLER

Simple, efficient, collet-type, pulls Chevrolet and Ford pilot bearings quickly, without damage. Turning screw expands outer shoulder and grips bearing. Expands to 11/16" dia. Has many other uses. Can be used alone or with No. 4056 slide-hammer puller. Length, 4⅜". Weight, .32 Lb. No. 4080B — Spare Body. No. 4080S — Spare Screw.



NO. 4510 POWER TYPE STUD REMOVER AND SETTER

Concentric hole with a wedge—most efficient, fastest design available. Extra husky for turning ⅜" to ⅝" studs and bolts with ½" drive power guns or manual socket handles. Single, reversible wedge is forced against stud by spring—saves time, prevents accidents. Screw keeps wedge from falling. Plunger, spring and wedge mounted in sleeve turned by knurled knob for reversing. File-type teeth dig into stud.
Length, 3½". Weight, 1.00 Lbs.
No. 4511—Spare wedge assembly.
No. 4512—Spare revolving sleeve assembly.

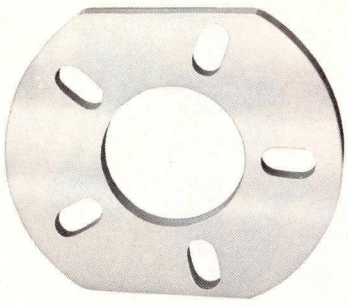


NO. 4033 REAR BEARING PULLER ADAPTER

Weight, 8.60 Lbs.

See No. 4100 set for use in pulling axles.

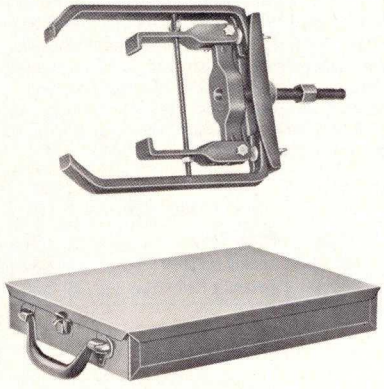
NO.	DESCRIPTION	WT., LBS.
4033B	Plates (2)	3.39 ea.
4033S	Bolt and Nut (2)	.50 ea.



NO. 4034 AXLE FLANGE PLATE

Weight, 4.80 Lbs.

See No. 4100 set for use in pulling axles.



NO. 4100A REAR AXLE PULLER SET

Pulls frozen flange-type or tapered axle on cars or light trucks. Forged alloy steel, properly heat treated, means a tough, strong tool. Large forcing screw gives tremendous pulling power. Eliminate damaging practice of torch heating, and hammering. With #4034 Flange Plate bolted to studs and #4033 Bearing Plate behind bearing, the 4100 Puller is used to push bearing off shaft.

WT. 21.70 LBS.

NO. 4100 SET is same as NO. 4100A without NO. 4100MB metal box.

NO.	DESCRIPTION	WT., LBS.
4100JL	Lg. Jaws (2)	2.04 ea.
4100JS	Sm. Jaws (2)	1.00 ea.
4100CAL	Cross Arm, lg.	2.46
4100CAS	Cross Arm, sm.	2.40
4100S	Forcing Screw	.84
4100N	Forcing Screw Nut	.12
4100W	Forcing Screw Washer	.04
4100B	Thrust Bearing	.14
4100CS	Clamping Screw	.20
4100CSN	Clamping Screw Wing Nut (2)	.04 ea.
4100JB	Jaw Nut and Bolt (2)	.12 ea.
4100PN	Jaw Pin (2)	.05 ea.
4100P	Tapered Axle Puller Plate	1.06
4100MB	Steel Box, 12¾" x 12" x 2"	7.40

NO. 4100-82 PUSH-PULLER

No beating! No heating! It pushes as it pulls!

SO EASY TO USE

1) Clamp hook jaws on axle flanges
2) Place puller legs on backing plate
3) Turn nut to pull axle

With this complete set, you can handle those tough frozen axles like any "ordinary job." You turn the nut — and the push-puller pulls axles or axle bearings straight out without damaging the parts. To replace bearing, use Proto Heavy Duty Puller No. 4110-B. Use the special adaptor for tapered axles.

ADDITIONAL VERSATILITY

Standardize on Proto Pullers and you save in costs. Proto Puller parts are interchangeable so that you can take care of all pulling jobs with fewer parts. Wt., 39 Lbs.

CONTENTS/NO. 4100-82 PUSH-PULLER SET

NO.	DESCRIPTION	QTY.
4100	Rear Axle Puller Set	1
4033	Bearing, Remover, Replacer	1
4034	Axle Flange Plate	1
4100-P	Taper Axle Adaptor	1
4100-51	Metal Box	1

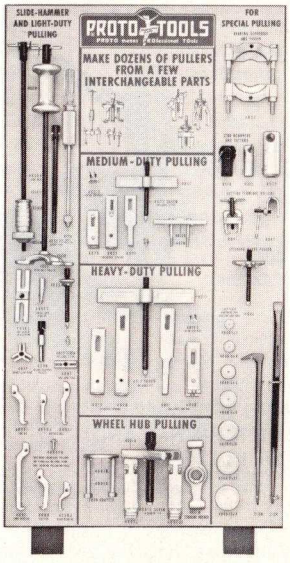
"How to use instructions" on inside cover.

NO. SD6 MASTER PULLER SET

Recommended for garages, repair shops and industrial plants that require all types of pullers. Parts are arranged "exploded" and properly located for assembly. Ten types of assemblies are shown by drawings. Interchangeable parts can be used in many setups, eliminating the need for a large number of costly special pullers. Sections of rack include basic parts used for five types of pulling — slide-hammer and light-duty, medium-duty, heavy-duty, wheel hub, and special. Outlines and parts numbers facilitate replacement. 32" x 63". ⅝" plywood rack has an easel back. Weight, 110 Lbs.

CONTENTS/NO. SD6 "PULLERMART"

NO.	QUAN.	DESCRIPTION
2124	1	Utility Pry Bar
2130	1	Rolling Head Bar
4001	1	Wheel Puller Set
4001JT	3	Wheel Puller Leg
4001W	1	Striking Wrench
4011S	2	Spring for Jaw
4020B	1	Medium Puller Set
4021S	2	Spring for Jaw
4022	1	Medium Puller Screw
4027	2	Narrow Jaw
4028	2	Cap Screw
4030B	1	Heavy Puller Set
4032	1	Bearing Separator
4040-1-14	1	14 Step Plates
4041	1	Small Utility Puller
4042	1	Battery Terminal Puller
4043	1	Steering Wheel Puller
4056	1	Slide-Hammer Puller
4056C	2	Slotted Crossarm
4056L	3	Long Inside Jaw
4056RS	1	Short Rod
4056S	1	Single Jaw Puller
4057J	3	Long Reversible Jaw
4058J	2	Pilot Bearing Jaw
4061	1	Two-Way Yoke
4063	1	Adjusting Nut
4066	3	Long Outside Jaw
4067	3	Long Outside Jaw
4080	1	Blind Bearing Puller
4510	1	Power Stud Remover
4515	1	Stud Remover
4532	1	Stud Remover
—	1	Storage Rack



SLIMSERT† INSERTS AND TOOLS

SLIMSERT Inserts are made of 17-4 PH stainless steel. They are available in screw sizes from #10 up to ¾" in both US Coarse and SAE Fine threads, including a 14 MM size for spark plug thread replacement. **Step Drills** are accurately ground with two diameters to clean out damaged threads and counterbore so that insert can be locked in place. **Taps** are standard, but three of the sizes are not usual shelf items, so Proto has them available. **Installing Tools** are made of alloy steel. They have knurled handles for ease of use; and nylon bushings to limit the amount of swaging for properly locking the insert into place.

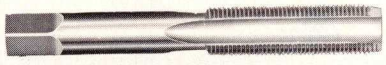
SLIMSERT† INSERTS

NO.	THREAD SIZE	TAP SIZE	WT., LBS.
6600-05	10-32	¼-28	.002
6600-06	10-24	¼-28	.002
6600-11	¼-28	5/16-24	.004
6600-12	¼-20	5/16-24	.004
6600-13	5/16-24	⅜-24	.006
6600-14	5/16-18	⅜-24	.006
6600-15	⅜-24	7/16-20	.008
6600-16	⅜-16	7/16-20	.008
6600-17	7/16-20	½-20	.01
6600-18	7/16-14	½-20	.01
*6600-19	½-20	9/16-24	.015
*6600-20	½-13	9/16-24	.015
*6600-21	9/16-18	11/16-12	.02
*6600-22	9/16-12	11/16-12	.02
6600-23	⅝-18	¾-16	.03
6600-24	⅝-11	¾-16	.03
6600-25	¾-16	⅞-20	.04
6600-26	¾-10	⅞-20	.04
††6600-50	14MM	⅝-18	.006
6600-54	18MM	⅞"-14	.008

*Only these taps available from Proto
††Not for tapered spark plugs

STEP DRILLS

NO.	DRILL USE SIZE WITH →	SIZE TAP	WT., LBS.
6601-06	.221/.250	¼-28	.03
6601-12	.281/.3125	5/16-24	.05
6601-14	.343/.375	⅜-24	.07
6601-16	.404/.4375	7/16-20	.12
6601-18	.468/.500	½-20	.14
6601-20	.531/.5625	9/16-24	.19
6601-22	.625/.6875	11/16-12	.34
6601-24	.702/.750	¾-16	.42
6601-26	.844/.875	⅞-20	.62
6601-50	.5905/.625	⅝-18	.20
6601-54	.805/.875	⅞-14	.45



TAPS

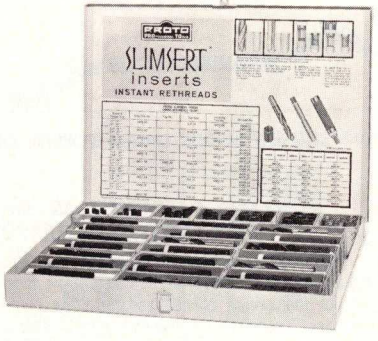
NO.	TAP SIZE	WT., LBS.
6603-20	9/16-24	.13
6603-22	11/16-12	.28
6603-26	⅞-20	.40

†T.M. Reg. U.S. Pat. Off. by Rosan Engineering Corp. Patents 3,081,808; 3,137,186 and 3,190, 169.

INSTALLING TOOLS

Complete Instructions packed with each individual Installing Tool.

NO.	SIZE	FOR INSERTS	WT., LBS.
6602-06	#10	6600-05 6600-06	.10
6602-12	¼"	6600-11 6600-12	.14
6602-14	5/16"	6600-13 6600-14	.28
6602-16	⅜"	6600-15 6600-16	.30
6602-18	7/16"	6600-17 6600-18	.43
6602-20	½"	6600-19 6600-20	.71
6602-22	9/16"	6600-21 6600-22	.71
6602-24	⅝"	6600-23 6600-24	.71
6602-26	¾"	6600-25 6600-26	.77
6602-50	14MM	6600-50	.47
6602-54	18MM	66054	.71



SLIMSERT† INSERTS SERVICE UNITS

Two assortments of SLIMSERT Inserts and Tools — in US Coarse threads or SAE Fine threads — are available in these Service Units. These two assortments cover 90% of all thread replacement needs. The container is a metal case with a full piano hinge top and a convenient snap catch. Installing instructions, a cross reference chart and a stock replacement diagram are found inside the top of the case. Service Unit Dimension: 11¼" x 16⅛" x 1 9/16" deep.

CONTENTS/NO. 6603-80
COARSE THREAD SERVICE UNIT

NO.	PART	SIZE	QTY.
6600-06	Insert	10-24	5
6600-12	Insert	¼-20	5
6600-14	Insert	5/16-18	5
6600-16	Insert	⅜-16	5
6600-18	Insert	7/16-14	5
6600-20	Insert	½-13	5

COARSE THREAD SERVICE UNIT (Cont.)

NO.	PART	SIZE	QTY.
6600-50	Insert	14MM	5
6601-06	Step Drill	.221/.250	1
6601-12	Step Drill	.281/.3125	1
6601-14	Step Drill	.343/.375	1
6601-16	Step Drill	.404/.4375	2
6601-18	Step Drill	.468/.500	2
6601-20	Step Drill	.531/.5625	1
6601-50	Step Drill	.5905/.625	2
6603-20	Tap	9/16-24	1
6602-06	Inst. Tool	#10	1
6602-12	Inst. Tool	¼"	1
6602-14	Inst. Tool	5/16"	1
6602-16	Inst. Tool	⅜"	2
6602-18	Inst. Tool	7/16"	2
6602-20	Inst. Tool	½"	1
6602-50	Inst. Tool	14MM	2
6603-70	Metal Box		1

Weight, 13.60 Lbs.

CONTENTS/NO. 6603-81
FINE THREAD SERVICE UNIT

NO.	PART	SIZE	QTY.
6600-05	Insert	10-32	5
6600-11	Insert	¼-28	5
6600-13	Insert	5/16-24	5
6600-15	Insert	⅜-24	5
6600-17	Insert	7/16-20	5
6600-19	Insert	½-20	5
6601-06	Step Drill	.221/.250	1
6601-12	Step Drill	.281/.3125	1
6601-14	Step Drill	.343/.375	1
6601-16	Step Drill	.404/.4375	2
6601-18	Step Drill	.468/.500	2
6601-20	Step Drill	.531/.5625	1
6603-20	Tap	9/16-24	1
6602-06	Inst. Tool	#10	1
6602-12	Inst. Tool	¼"	1
6602-14	Inst. Tool	5/16"	1
6602-16	Inst. Tool	⅜"	2
6602-18	Inst. Tool	7/16"	2
6602-20	Inst. Tool	½"	1
6603-70	Metal Box		1

Weight, 12.06 Lbs.

14MM & 18MM SPARK PLUG KITS

Packaged in metal-edge cartons. "Instant Re-Thread" Kits contain inserts and tools for spark plug thread replacements.

NO. 6603-82 14MM KIT

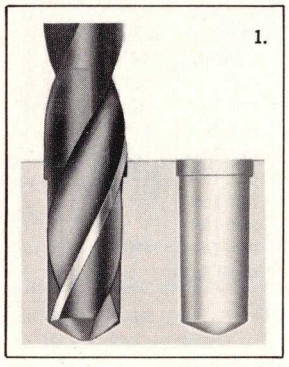
NO.	PART	SIZE	QTY.
6600-50	Insert	14MM	5
6601-50	Step Drill	.5905/.625	1
6602-50	Inst. Tool	14MM	1

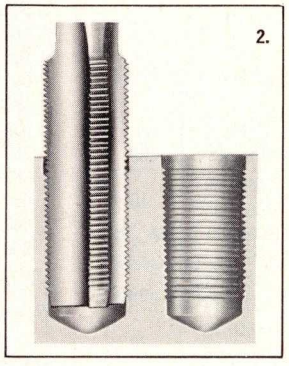
NO. 6603-83 18MM KIT

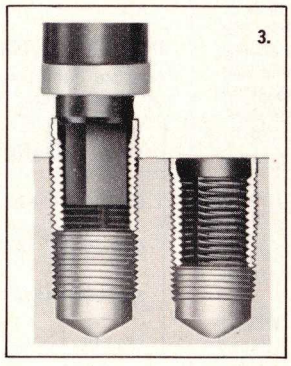
6600-54	Insert	18MM	5
6601-54	Step Drill	.875/.805	1
6602-54	Inst. Tool	18MM	1

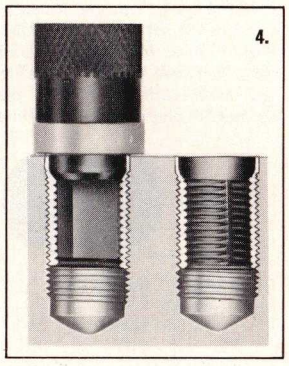
Weight, .94 Lbs.

HOW TO USE PROTO® SLIMSERT† INSERTS









Determine the thread size and number of threads per inch required. From the chart, select the proper size Step Drill, Tap, Installing Tool and SLIMSERT Insert.

1. STEP DRILL One operation drills and counterbores to prepare the hole or clean out the damaged threads.

The counterbore should go just far enough beneath the surface to clear the head of the SLIMSERT Insert plus 0.015" approx.

2. TAP Tap threads into the full depth of the drilled hole.

Clean chips from hole with brush or air hose. Use adequate eye protection at all times.

3. INSTALL Turn the SLIMSERT Insert into the tapped hole using the Installing Tool as a driver.

The SLIMSERT Insert should be installed to approximately 0.015" below the work surface.

4. LOCK With the Installing Tool still in place, strike the head of the Installing Tool with a hammer until the nylon washer touches the work surface.

The Proto SLIMSERT Insert is now firmly locked in place, providing the original thread size ready for trouble-free use.

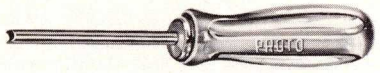
PROTO® SLIMSERT INSERTS CROSS-REFERENCE CHART

SCREW & THREAD SIZE	STEP DRILL NO.	TAP NO.	TAP SIZE	INSTALLING TOOL NO.	SLIMSERT INSERT NO.	LENGTH
10 -32 10 -24	6601-06 "	— —	1/4-28 "	6602-06 "	6600-05 6600-06	.29
1/4 -28 1/4 -20	6601-12 "	— —	5/16-24 "	6602-12 "	6600-11 6600-12	.38
5/16 -24 5/16 -18	6601-14 "	— —	3/8-24 "	6602-14 "	6600-13 6600-14	.47
3/8 -24 3/8 -16	6601-16 "	— —	7/16-20 "	6602-16 "	6600-15 6600-16	.56
7/16 -20 7/16 -14	6601-18 "	— —	1/2-20 "	6602-18 "	6600-17 6600-18	.66
1/2 -20 1/2 -13	6601-20 "	6603-20 "	9/16-24 "	6602-20 "	6600-19 6600-20	.75
9/16 -18 9/16 -12	6601-22 "	6603-22 "	11/16-12 "	6602-22 "	6600-21 6600-22	.84
5/8 -18 5/8 -11	6601-24 "	— —	3/4-16 "	6602-24 "	6600-23 6600-24	.94
3/4 -16 3/4 -10	6601-26 "	6603-26 "	7/8-20 "	6602-26 "	6600-25 6600-26	1.12
14MM	6601-50	—	5/8-18	6602-50	6600-50	.42
18MM	6601-54	—	7/8"-14	6602-54	6600-54	.46

†T.M. Reg. U.S. Pat. Off. by ROSAN ENGINEERING CORP. Patents 3,081,808, 3,137,186 and 3,190,169

SPECIAL PURPOSE TOOLS

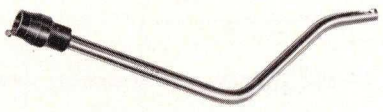
For Fedl. Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



NO. 2003 BRAKE SHOE RETAINING SPRING TOOL FOR FALCON, COMET AND VALIANT

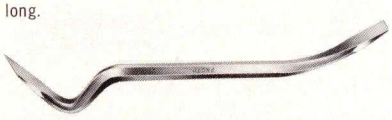
A "must" for removing and replacing retaining springs on brakes of these three compact cars. Fine alloy steel blade is heat treated entire length, chrome plated and molded into a tough plastic handle. Designed for comfort, the handle is hand fitted with deep flutes to prevent rolling. **EASY TO USE.** Simply push tool into spring and twist to disengage. Keep left hand on clip in back of drum to keep it from dropping as spring is removed.

SHANK SIZE	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
3/16"	3"	6 3/8"	.10



NO. 2005 BRAKE SPRING TOOL

To remove and replace Bendix Brake Springs or any type where the spring is attached to a post. Has replaceable spring removal socket. Total wt., .40 Lb. No. 2005S Replaceable Socket. 9 1/2" long.

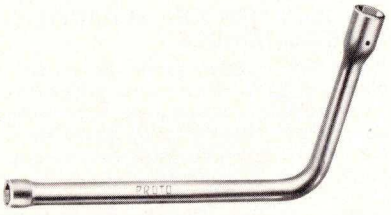


NO. 2006 BRAKE ADJUSTING TOOL

Adjusts star nuts on two-shoe Bendix brakes. It is 9" long, has 1 3/4" spoons and weighs .30 Lb.

NO. 2007 BRAKE ADJUSTING TOOL

Is for Chevrolet brakes and other close places. It is 7 1/4" long, has 1 3/16" and 1 7/16" spoons and weighs .22 Lb. Both are alloy steel.



NO. 2009 BRAKE BLEEDER WRENCH

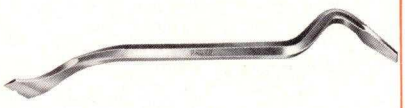
For Chevrolets, Fords and Lincolns with ball joint front end suspension. L-shaped handle has 5/16" hex. socket to remove bleeder screw cap and 3/8" hex. socket for turning screw. Alloy steel. Length, 5 3/4". Wt., .24 Lb.

NO. 2010 CHRYSLER BRAKE SPRING TOOL

Forged, milled and swaged from Protoloy steel, this tool designed to quickly remove and replace brake shoe returns on '57, '58, 59 Chryslers, Dodges and Plymouths. Length 5 1/2" x 6 1/4". Wt., .25 Lb.

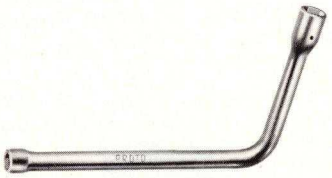
NO. 2011 CORVAIR BRAKE ADJUSTING TOOL

Special modified end adjusts Corvair, Chevrolet, Buick—clears suspension system obstructions. Opposite end adjusts many other Bendix brakes. Hot-formed from special alloy steel. Chrome plated. 9" long. Lots of leverage. Wt. .30 Lb.



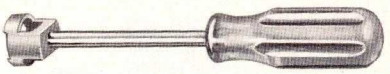
NO. 2012 PONTIAC TEMPEST BRAKE ADJUSTING TOOL

Designed to clear suspension obstructions on front wheels of Pontiac Tempest. Special angled blade with notches speeds adjustment of front brakes. Standard end for rear wheels and other Bendix-type brakes. Alloy steel, chrome plated, 9" long. Wt. .30 Lb.



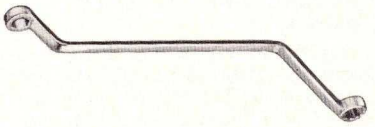
NO. 2013 BRAKE BLEEDER TOOL 1/4" AND 3/8"

Speeds brake work. 1/4" hex opening for compact cars; 3/8" hex for conventional cars and trucks. Vent holes in socket-end permit line to be bled without removing tool from bleeder screw. Hot forged alloy steel, chrome plated, 5 3/4" long. Wt. .24 Lbs.



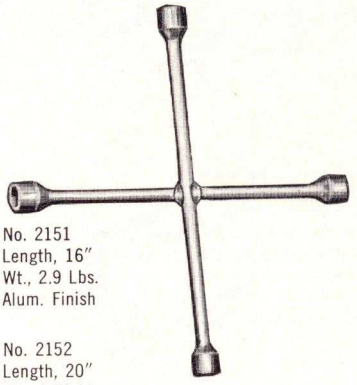
NO. 2014 BRAKE SHOE RETAINING SPRING TOOL

Removes and replaces the dished retaining washer of spring assembly. Cup is knurled for secure grip and notched for washers with ears. Place cup on retaining washer, pressure on handle depresses spring and twisting motion disengages washer for removal. Length 6 31/32". Wt. .24 Lbs.



NO. 2015 CHRYSLER BRAKE ADJUSTING TOOL

High offset brake bleeder and adjusting wrench 3/8" and 7/16" hex opening designed for use on late model Chrysler products. The 3/8" end will fit most passenger cars. The 7/16" end is used when adjusting brake shoe eccentric bolts. High offset clears all obstructions, leaving room for hand to fit between tire and wrench. Length 10". Wt. .18 Lbs.



No. 2151
Length, 16"
Wt., 2.9 Lbs.
Alum. Finish

No. 2152
Length, 20"
Wt., 3.38 Lbs.
Chrome Plated

NO. 2151 AND 2152 WHEEL LUG NUT WRENCHES

Speedy, four-way rim wrenches, forged from special steel. Finely balanced. No. 2151 has hex openings: 3/4" - 19mm - 13/16" - 7/8". No. 2152 has hex openings: 3/4" - 13/16" - 7/8" - 15/16". These sizes fit lug nuts of most cars and trucks. The extra length of the No. 2152 clears the deep fenders of all late model cars.

NO. 2301 MUFFLER REMOVAL TOOL

A practical, simple tool for removing mufflers and tailpipes. Makes quick work of taking off worn-out mufflers that are corroded, burned and hard to reach. Prevents damage to usable parts. Forged from special alloy steel. Length, 6 1/8". Wt., .29 Lb.

PROTO PROfessional TOols

For Fedl. Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

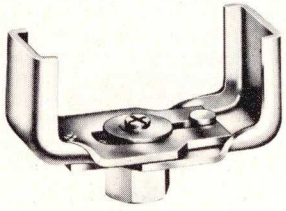
The wrench that eliminates damage and distortion to fuel filter bowls

3/8" Sq. Drive

Wt., .30 Lbs.

NO. 2303 FORD FUEL FILTER WRENCH

Makes the Removal of Fuel Filters on Ford products a simple task. Eliminates the problem of removing the fuel filter bowl in inaccessible areas. Special socket opening fits knurling on fuel filter bowl. Any 3/8" Sq. drive ratchet or attachment used with wrench removes filter bowl with ease. Die cast from high strength aluminum alloy with a burnished high luster finish.

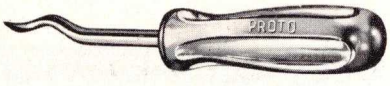


NO. 2304 OIL FILTER REMOVAL TOOL

Removes most standard domestic type and many foreign type disposable-type oil filters, quickly! Easily! Grips like a vise. Self-locking, self-adjusting. Keeps hands and arms away from hot manifolds. Wt. .90 Lb.

NO. 2305 COTTER PIN TOOL

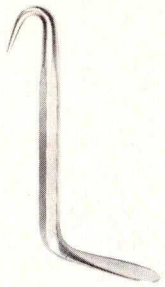
Excellent for spreading or extracting cotter pins. Pointed end is inserted in the pin eye and the pin removed by prying. Flat end is used for spreading pin after insertion. Many other uses, such as insertion and removal of packings. Length, 6 9/16". Wt., .11 Lb.



NO. 2306 COTTER PIN PULLER WITH PLASTIC HANDLE

Insert point of this handy tool in eye of cotter pin . . . and pry pin out. Specially heat-treated alloy steel blade is strong and tough. Precision-formed curves give same leverage advantages as a rolling head pry bar. Large handle is comfortable and non-slipping for powerful grip.

Wt., 0.25 Lbs.
Length, 7 3/4"



NO. 2307 HOSE RIPPER TOOL

Hundreds of other uses—to pry, pull, rip, tear and twist. Length 5 5/8". Wt. .20 Lb.

NO. 2310 DELCOTRON ALTERNATOR PULLEY TOOL

Standard tools cannot reach in to torque the Delcotron Alternator pulley shaft nut properly. The No. 2310 has a thin-walled 15/16" hex socket which fits inside the pulley hub and over the shaft nut. A 5/16" hex bit, with a 1 1/4" bolt head, fits into the Delcotron shaft. By holding the Delcotron Alternator Pulley Tool's hex bit assembly with a 1 1/4" open end wrench, and inserting a 1/2" square drive torque wrench, the pulley shaft nut is ready to be torqued. Heat treated—Nickel chrome finish. Drop forged alloy steel construction. Wt. .52 Lb.

1/2" Square drive allows torquing of shaft nut
5/16" Hex bit fits into delcotron shaft
15/16" Thin wall socket holds shaft nut
1 1/4" Nut for holding shaft

NO. 2315 PISTON RING COMPRESSOR

Single-band type, designed for low-horsepower, small-bore engines used on auxiliary power plants and pumping stations, lawn mowers, outboard motors, motor scooters. Range 2" to 5". Band width 1 3/4". Wt., .32 Lb.

NO. 2316 PISTON RING COMPRESSOR

Band-operating ratchet prevents breakage and slippage. Wide band (3 1/2") has 2 1/8" to 5" range. Ell handle included. Wt. .70 Lb.

IMPORTANT SAFETY RULES

Proto Tool Company disclaims responsibility for injury or damage caused by tools improperly used; or from tools which have been abused or badly worn; or from tools improperly repaired by others.

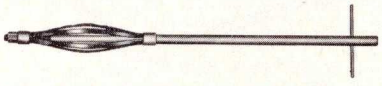
Hand tools, although commonly used, are specialized for particular jobs. Always use the right size and type of tool for the job being done. Keep tools in proper working condition. "Mushroomed" heads or chisels and punches should be ground down to eliminate chances of chipping. Screwdriver blades, when worn, should be hand filed to original shape. Screwdrivers are made to turn screws, nothing else.

Only power drive sockets should be used on pneumatic or electric impact wrenches.

All wrenches are designed to a specific size-length-strength ratio. The use of a "cheater" or any other means for increased levelage is hazardous.

Eye protection, through the use of safety glass or hood, is recommended for any job involving the use of tools, particularly when using punches, chisels and drills.

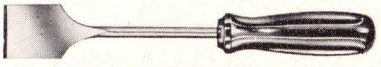
Use hand tools only for their designed purposes and within their size range.



NO. 2335 VALVE GUIDE CLEANER

Turning a nut adjusts the five flexible blades to any valve guide size. Range 5/16"-1/2". Length, 8 7/8". Wt. .10 Lb.

Individual blade—2335B



NO. 2336 GASKET SCRAPER

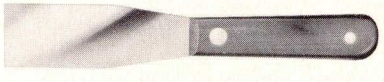
For removing shellacked gaskets, scraping carbon and many other uses. Has handle of tough, fire-resistant plastic, and round blade of special alloy steel. Length, 11 1/4". Blade width, 1 1/2". Wt., .39 Lb.

NO. 2337 FLEXIBLE CARBON SCRAPER

Sliding band regulates the flexibility of the ten round spring steel blades. Length, 8 3/4". Width, 15/16". Wt., .30 Lb.

NO. 2338 CARBON SCRAPER PLASTIC HANDLE

Narrow blade reaches places other scrapers can't. Blade is angled for efficient scraping. Alloy steel blade can be re-sharpened many times. Nickel chrome finish, moulded-on plastic handle makes this scraper easy to use, easy to keep like new. Length, 11 1/2". Width, 1". Wt., .38 Lb.

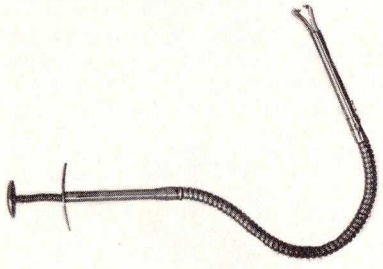


NO. 2339 PUTTY KNIFE

1 1/4" flexible blade. Smooth wood handle. Has hole in handle for hanging. For general scraping use. Wt., .19 Lb.

SPECIAL PURPOSE TOOLS

Federal Specs.: MIL-F-4571B, Type I, Class 2.

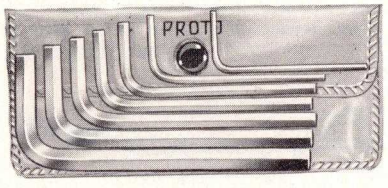


NOS. 2344 & 2345 GRAB-ALL RETRIEVING AND HOLDING TOOLS

Two grippers at end of flexible casing grab all types of small objects in hard-to-reach places. These tools bend around obstructions and hold both metallic and non-metallic items—two big advantages over magnet rod types. Grab-Alls are useful for holding small things, for fishing objects out of garbage disposers, sinks and drains, and for retrieving nuts, cotter keys that fall into tight spots.

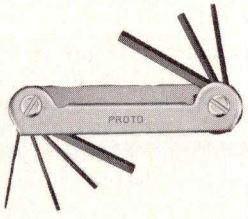
NO.	SIZE	LENGTH	WT., LBS.
2344	1	17½"	.19
2345	2	26½"	.26

HEX KEY SETS



NO. 4977 WRENCH SET/ HOLLOW HEAD SCREW *

Handy 2" x 4½" plastic case, containing seven plated L-type hexagon keys for turning hollow head screws. Sizes—5/64 (fits No. 8 set screws), 3/32 (No. 10), 1/8 (1/4"), 5/32 (5/16"), 3/16 (3/8"), 7/32 (7/16") and 1/4 (1/2"). Wt. .21 Lb.



NO. 4978 WRENCH SET/ HOLLOW HEAD SCREW *

Pocket-knife type 3¾" metal case, with seven hex keys for hollow head screws. Sizes—.050 (fits No. 4 set screws), 1/16 (Nos. 5 and 6), 5/64 (No. 8), 3/32 (No. 10), 1/8 (1/4"), 5/32 (5/16") and 3/16 (3/8"). Wt. .22 Lb.

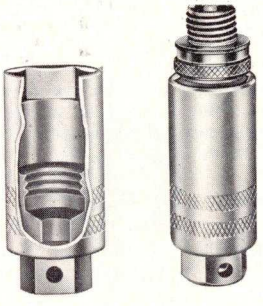
NO. 5020-50 & 5320-50 5/8" HEX SPARK PLUG SOCKETS

For removal and installation of 5/8" spark plugs on some General Motor cars; tractors, outboard motors, stationary and portable engines, and lawn mowers.

Specially designed fitted rubber inserts hold 5/8" spark plugs securely, prevent porcelain damage. Special alloy steel construction permits "thin wall" socket design, for more effective use in confined areas. Solid ¾" male hex for optional flat wrench use. Wide knurled band for better fingertip grip. Polished chrome rust resistant finish.

NO.	DRIVE SIZE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5020-50	3/8"	5/8" Hex	2½"	.23
5320-50	½"	5/8" Hex	2½"	.21

No. 5021-51. Rubber Insert Replacement for above sockets.



5026HPA AND 5326HPA SPARK PLUG SOCKET WITH REPLACEABLE RUBBER INSERT

To remove and replace spark plugs more quickly and without breakage. Insert lasts longer—has special new grooves that grip on brass tip as well as porcelain. Socket—hot-broached of special alloy steel; hex opening for greater strength; polished and chrome plated.

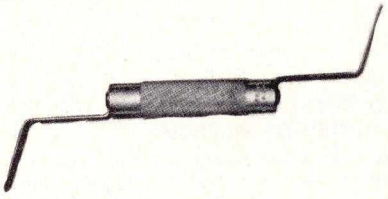
NO.	DRIVE SIZE	NOMINAL OPENING	LENGTH	WT., LBS.	SPARE INSERT
5026HPA	3/8"	13/16"	2 17/32"	.28	5026R
5326HPA	½"	13/16"	2 17/32"	.27	5026RA

*See page 53 for additional Wrench Sets

NOS. 5244, 5444, 5446 HEAVY DUTY SCREWDRIVER SOCKETS

For drag links and screw adjustments on steering assemblies, shock absorbers, starters. Made from special alloy steel.

NO.	DRIVE	BIT SIZE	LENGTH	WT., LBS.
5244	3/8"	5/8" x .116"	1 1/32"	.07
5444	½"	¾" x .115"	1 7/32"	.11
5446	½"	15/16" x .154"	1 7/32"	.17



NO. 6521 SPECIAL OFFSET FEELER GAUGES

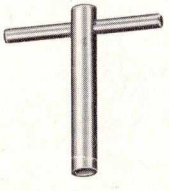
Holder and Feeler Gauges to measure valve clearance. Set contains offset stepcut blade No. 6521A—.014"/.016"—for intake valve adjustment, and blade No. 6521B—.027"/.029"—for an exhaustive valve adjustment. Blades are replaceable. Aluminum handles.

For Cummins Diesel Engines.

Federal Specs.: See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

NO. 6524 STOPLIGHT SWITCH & OIL PRESSURE SENDING UNIT SOCKET— 3/8" DRIVE

Removes and replaces both stoplight switch and oil pressure sending units quickly, safely. 3/8" drive, 1" and 1 1/16" hex diameters in single socket. Manufactured from Protoloy® special alloy steel. Length 2", Weight .3 lbs.

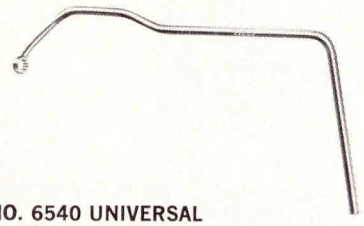


NO. 6528 CARBURETOR JET WRENCH

Fits most Strombergs. Made of alloy steel. Length, 2¼". Wt., .06 Lb.

NO. 6539 FORD V8-85 VALVE LIFTER

Long leverage breaks loose the toughest guides. Push guide down to remove keeper, and pry to force out guide. Stock, ¾". Length, 30". Alloy steel. Wt., 3.5 Lbs.

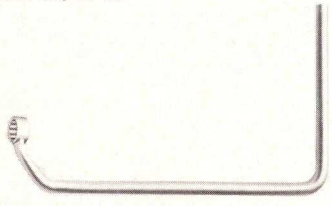


NO. 6540 UNIVERSAL DISTRIBUTOR WRENCH

Designed for rear mounted distributors and useful wherever ½" hold down nuts are used. Alloy steel, chrome plated. Length, 16½". Wt., .68 Lb.

NO. 6541 BUICK DISTRIBUTOR WRENCH

For reaching and turning distributor mounting bolt on late Buicks. Head has 12-point, 9/16" box opening and is offset 2" to clear obstructions. Height, 10⅜". Handle length, 6½". Alloy steel. Wt., .57 Lb.



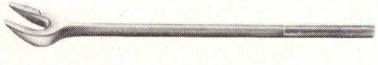
NO. 6542 DISTRIBUTOR WRENCH

Time saver! Proto's new distributor wrench gets through that jungle of wires, metal and other obstructions—down to the distributor hold down bolt. Especially effective for late model Ford and Mercury distributor removal — particularly those distributors mounted on the front of the engines. Can also be used on other makes of cars using ½ inch hex hold down bolt on the distributor.

NO.	DESCRIPTION	LGTH.	WT., LBS.	PKG.
6542	½", 12-Pt. Open.	10"	.46	Bulk

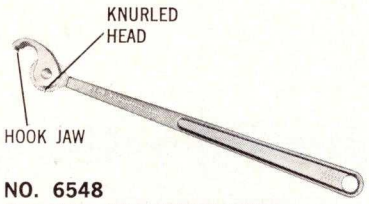
NO. 6545 DRAG LINK & SHOCK ARM TOOL

Slim, tapered fork is readily inserted to separate shock links and tie rods. Length, 16". Fork opening, 21/32". Made of special alloy steel. Wt., 2.3 Lbs.



NO. 6546 PITMAN ARM PRY BAR

Eliminates need for expensive pullers to remove Pitman arms. Useful also for pulling gears, bearings and pulleys, and lifting blocks and heavy assemblies. Length, 20". Fork opening, 1 9/32". Of alloy steel. Wt., 2.8 Lbs.



NO. 6548 TIE ROD ADJUSTING TOOL

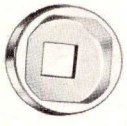
Proto's Tie Rod Adjusting Tool applies a rotating force. Speeds up every tie rod sleeve adjusting job. Fits 99% of all tie rod adjusting sleeves. Hook jaw and knurled head work together to spread and turn tie rod adjusting sleeve. Extra strong hook jaw, will not spread. Racheting-like action permits use in tight areas. 100% forged alloy steel, heat treated to withstand severe usage.

6548J—Hook jaw

BALL JOINT SOCKETS

VALIANT/DODGE/PLYMOUTH/CHRYSLER/DE SOTO

Ball joint systems on Chrysler products require sockets with special openings. Three different sizes are required.

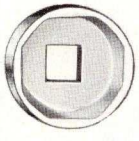


NO. 6549L

CAR	SIZE	LENGTH	WT., LBS.
Valiant	1¾"	3⅞"	1.44

NO. 6550

Dodge, Plymouth	1⅞"	2"	.92



NO. 6551

Chrysler, De Soto	2⅛"	2 3/32"	1.00

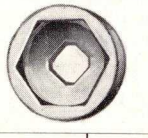
NOS. 6558, 6559, 6560 BALL JOINT SOCKETS

BUICK AND OLDS

Ball joint systems of these cars require special sockets. Three different sizes are required.

NO. 6558

CAR	SIZE	WT., LBS.
BUICK SPEC. & OLDS F-85	1 9/16"	.90



NO. 6559

BUICK (lower ball joint)	2 1/16"	1.44

NO. 6560

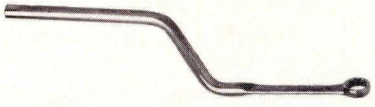
BUICK (upper ball joint)	1⅞"	1.10

NO. 6564 FRONT END BALL JOINT SOCKET / ¾" Drive

The ball joint systems on Corvair require sockets with special configurations. This socket has 1⅝" openings. Shipping Wt., .82 Lb. Packaged in bulk.

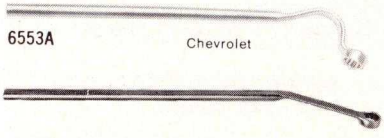
NOS. 6552 THROUGH 6556 SPECIAL FRONT END WRENCHES

These wrenches are designed for time saving use in front end adjustment. Front wheel nuts and bolts are not easily accessible with standard tools. Special tools with long handles and odd shapes are needed to clear obstructions.



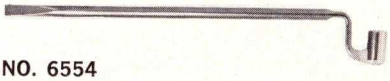
NO. 6552

CAR	SIZE	WT., LBS.
Corvair	9/16"	.46



NO. 6553, 6553A

CAR	SIZE	WT., LBS.
Chevrolet,	11/16"	1.06
F-85 Olds	11/16"	1.02

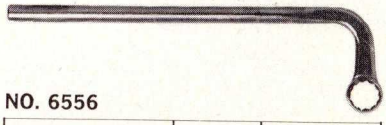


NO. 6554

Ford, Mercury	¾"	1.80

NO. 6555

Oldsmobile, Buick	⅞"	1.46



NO. 6556

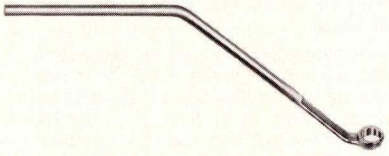
Rambler	15/16"	1.30

NO. 6557 RATCHETING BOX WRENCH/for 1962 Rambler

ECCENTRIC BOLT

Heat-treated steel with accurate broached opening. Nickel chrome finish. Fine tooth ratchet wheel gives new bite every 18°. Turning wrench over reverses direction.

LENGTH	SIZE	WT., LBS.
12¾"	⅞"	3.07

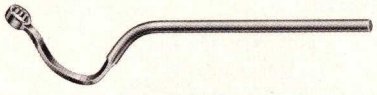


NO. 6561 SPECIAL WRENCH

'61 AND '62 OLDS

Needed for use on '61 and '62 Olds for front end alignment.

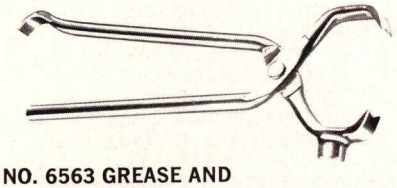
LENGTH	SIZE	WT., LBS.
17"	13/16"	1.46



NO. 6562 CORVAN BOX WRENCH

Special 1 1/16" wrench for reaching adjusting nuts on Corvair Trucks. Special design clears all obstruction for fast easy wheel alignment.

Length, 10". Wt., 1.05 Lbs.

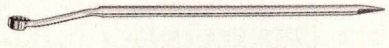


NO. 6563 GREASE AND HUB CAP TOOL

Forged alloy steel properly heat treated assures a tough long lasting tool. Tapered and V cut jaws of the tool fit around and behind crimped ridge of the grease cap to provide firm wedging grip that easily removes the tightest hub cap. Solid rivet joint keeps jaws in proper alignment throughout the long life of this Proto guaranteed tool. Black oxide finish provides long lasting protection from rust or corrosion. Wt., 1 Lb.

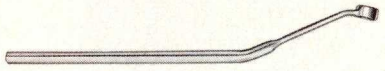
NOS. 6565 THROUGH 6569 FRONT END BOX WRENCHES

These long handled wrenches make it easy to clear obstructions and efficiently perform front end adjustments.



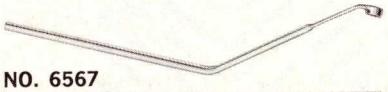
NO. 6565

LENGTH	OPENING SIZE	WT., LBS.
18½"	13/16"	1.45



NO. 6566

LENGTH	OPENING SIZE	WT., LBS.
17¼"	11/16"	1.02



NO. 6567

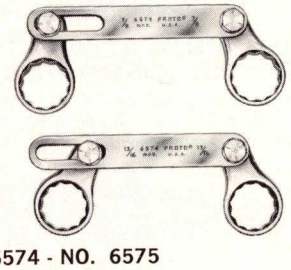
23½"	¾"	1.70

NO. 6568

17½"	¾"	1.20

NO. 6569

24½"	¾"	1.70



NO. 6574 - NO. 6575 HOLDING CLAMPS

OLDSMOBILE FRONT END WORK

Now, reach hard-to-get at adjusting bolts and nuts with Proto's special holding clamps. Caster and camber adjustments on the 1962, 63 and 64 Model Oldsmobiles are speeded up. Labor requirements are reduced. These holding clamps enable one man to do the front end adjustments formerly requiring two men. The special holding clamps lock control arm bolts or nuts in position so that they can be tightened or loosened from under the fender.

No. 6574—13/16" special holding clamps for 1962-63 Olds.

No. 6575—⅞" special holding clamps for 1964 Olds. Wt.,.40 Lb., shipped in bulk.

NO. 6734 OVERHEAD VALVE ADJUSTERS

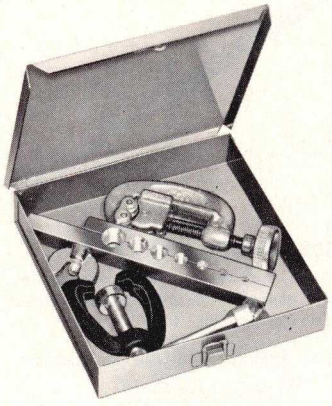
For accuracy, speed and ease when adjusting overhead valves. Using a ½" drive socket, loosen lock nut, turn alloy steel screwdriver with knob for adjustment (setting valve clearance with feeler gauges), and then tighten lock nut with handle while holding the screwdriver knob. Also used with clutch adjusting machines. For all 6-cylinder and many V8 overhead valve engines without hydraulic lifters. Has clearance for adjusting valves under fire wall on late 6-cylinder Chevrolets. Maximum bit length, 1⅜". Wt., .31 Lb.

No. 6734-H Valve Adjuster Spring

No. 6734-S Valve Adjuster Blade

NO. 6734S (For use with No. 6734)

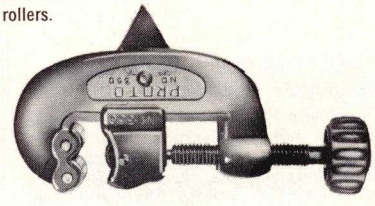
Spare screwdriver blade with knob. No. 6734H—Spare socket-holding spring with screw.



NO. 349 TUBING CUTTER SET

No. 350 Tubing Cutter, No. 351 Tubing Flaring Tool and No. 351-V Block in No. 4029 Metal Box with hasp. Wt. 4.47 lbs.

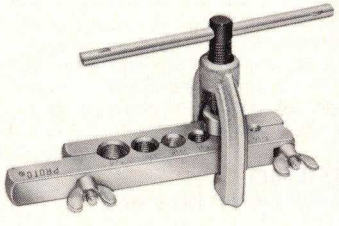
Special flare-cut-off rollers.



NO. 350 TUBING CUTTER

An increasingly useful tool for automotive and truck mechanics, plumbers, etc. Cuts metal tubing or conduit from ⅛" to 1⅛" O.D. Husky screw in alloy frame, plus scientifically heat treated alloy steel blade gives clean, fast cuts and long service. Has special flare-cut-off rollers which permit cutting near flared tubing ends as well as on straight tubing sections. Retractable Reamer Blade on chrome plated trame.

No. 350C, Replaceable Cutter

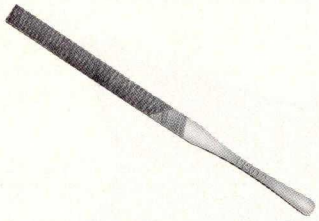


NO. 351 TUBING FLARING TOOL WITH SLIP-ON YOKE

A complete flaring tool for tubing sizes 3/16" through ⅝". Each part in the assembly is carefully finished to best perform its special function . . . Flaring Yoke is malleable iron of proper toughness; tapered cone is hardened and polished, and rides on a ball-bearing; all steel parts are bright plated. Yoke Frame is black wrinkle finish. Wt., 2.00 Lbs.

351-V—"V" Block

351-Y—Yoke



NO. 2302 IGNITION POINT FILE, 5″

Fine tungsten Point File for spark plugs, distributor points and other electrical contact points. Smooth extended grip. Wt., .015 Lb.

No. 2302M Ignition Point File Merchandiser. Set of 12 files.

NO. 2302M IGNITION POINT FILE MERCHANDISER

CUMMINS DIESEL TOOLS

NO. 6519 EXTRA DEEP 5/8″ HEX SOCKET — 1/2″ SQUARE DRIVE

This extra deep 5/8″ hex socket is necessary when servicing or installing Cummins Diesel engines that have a Jacobs Engine Brake mounted on them. A minimum of 3 1/4″ bolt clearance in the socket is necessary to remove the studs. Manufactured from Protoloy®, selected alloy steel. Heat treated, nickel chrome finish.

NO.	DESCRIPTION	LENGTH	WT. LBS.
6519	5/8″ Hex Socket	4 1/2″	.05

NO. 9515-A SET VALVE AND INJECTOR ADJUSTING TOOL SET FOR CUMMINS DIESEL ENGINES

Designed to make the adjustments of Cummins Diesel engines' valves and injectors easier and more precise. This 5-piece set contains all the tools necessary to make these critical adjustments. It has a special offset feeler gauge, box wrench to get around obstructions; a special screwdriver bit and torque wrench to torque fuel injectors to precise limits.

NO. 9515 SET

Same as 9515A without torque wrench.

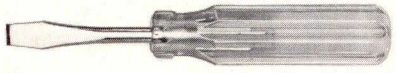
CONTENTS/NO. 9515-A SET

NO. 6061 TORQUE WRENCH

Provides critical torque necessary to adjust fuel injectors. Torque range, 0 to 150 in./lbs.

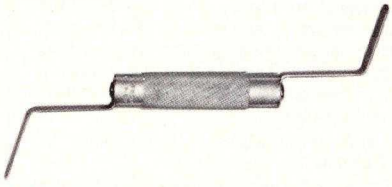
NO. 4746 SPECIAL 3″ x 1/4″ SQUARE DRIVE SCREWDRIVER BIT

This bit needed to torque the fuel injectors. Heat treated alloy steel, nickel chrome finish, 1/2″ x .082 blade, nickel chrome finish.



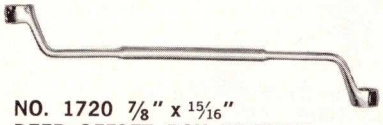
NO. 9602 SPECIAL STUBBY SCREWDRIVER

Turns adjusting screw on valve to set correct valve stem clearance. Heat treated alloy steel, nickel chrome finish, 1/2″ x .070 blade, 8″ long. Plastic handle.



NO. 6521 SPECIAL OFFSET FEELER GAUGES

Holder and feeler gauges to measure valve clearance. Set contains offset stepcut blade No. 6521A—.014″/.016″—for intake valve adjustment, and blade No. 6521B—.027″/.029″—for an exhaust valve adjustment. Blades are replaceable. Aluminum handle.



NO. 1720 7/8″ x 15/16″ DEEP OFFSET BOX WRENCH

Two inch offset on both heads to clear intake manifold on some Cummins diesel engines. Loosens lock nut on valve adjusting screws. Precision broached, heat treated, drop forged steel, 12-pt. opening, nickel chrome finish.

NO. 1721 DEEP OFFSET BOX WRENCH 3/4″ OPENING

Required to loosen and tighten locknuts on the valve and injector adjusting screws on late model Cummins Diesel engines. Has 4″ deep offset to clear obstructions. Made from Protoloy special alloy steel. 18″ long.

PROTO® PROFESSIONAL TUNE-UP EQUIPMENT

FOR MORE EFFICIENT TUNE-UPS

Proto, one of the leading suppliers of professional tools and equipment for automotive mechanics, now offers the most advanced new line of tune-up equipment available today.

These fine instruments feature large, clear, easy-to-read jeweled D'Arsonval meters with color-coded dial faces for instant identification. All precision meters are enclosed in durable Cycolac®* cases for long service life. The streamlined cases are designed for handling ease and accurate reading from any angle, regardless of meter position.

The electrical engineering is all new and incorporates the ultimate in modern, scientifically-designed circuitry for instantaneous performance and fail-proof reliability.

The exceptional speed, accuracy and dependability of this new Proto line makes it ideal for garages, service stations, car dealerships, fleet and marine use. Self-powered independence and full portability of all compact units make them a "must" for service calls.

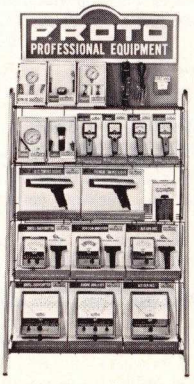
Included with every unit is an expertly prepared "How-To-Use" booklet with step-by-step instructions and schematic diagrams showing you the fastest, safest and most profitable procedure for every test.

These are the most complete and compact service units on the market today and the only professional line of tune-up equipment backed by the famous Proto warranty.

THE COMPLETE LINE:

TEST STAND TUS-1
DWELL TACHOMETER DT-25
DWELL METER D-25
IGNITION TESTER IGN-25
ALTERNATOR-GENERATOR-REGULATOR AGR-25
DWELL TACHOMETER DT-40
IGNITION TESTER IGN-40
ALTERNATOR-GENERATOR-REGULATOR AGR-40
ENGINE ANALYZER EGA-80
DWELL TACHOMETER DT-80
ALTERNATOR-GENERATOR-REGULATOR AGR-80
DC POWER TIMING LIGHT PTL-10
AC POWER TIMING LIGHT ACP-10
NEON TIMING LIGHT NTL-10
COMPRESSION GAUGE CTR-10
COMPRESSION GAUGE CTR-20
COMPRESSION GAUGE CT-21
VACUUM AND FUEL PUMP PRESSURE GAUGE VF-25
REMOTE STARTER SWITCH RS-26
REMOTE START AND STOP SWITCH RSI-30
CARBON PILE UNIT CP-100
STARTER GENERATOR CURRENT TESTER SGI-5

Write Proto for Professional Tune-Up Equipment Catalog, PR 65195



*Cycolac® is a Registered Trademark of Marbon Chemical Division of Borg-Warner Corp.

1/4" SQUARE DRIVE MIDGET SOCKET WRENCHES

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

1/4" SQUARE DRIVE MIDGET SOCKET WRENCHES

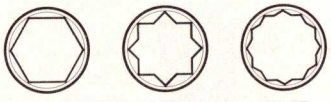
Proto sockets are made from Protoloy® special alloy steel chrome plated, and have thin walls to get at hard-to-reach nuts.

Midget sockets are specifically designed for all kinds of light work where small nuts and bolts may be turned, such as the repair of carburetors, distributors, radios and instruments. They are accurately made from alloy steels for super strength — and scientifically heat treated to insure long, dependable service.

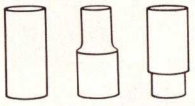
See page 90 for Metric sizes.

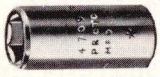
See page 64 for Power & Impact sizes.

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see Chart page 115.



SOCKET TYPE



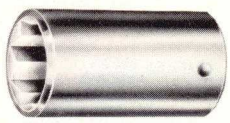


NO. 4704 - NO. 4716 REGULAR LENGTH SOCKETS HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4704	B	1/8"	7/8"	.01
4705	B	5/32"	7/8"	.02
4706	B	3/16"	7/8"	.02
4707	B	7/32"	7/8"	.02
4708	B	1/4"	7/8"	.02
4709	A	9/32"	7/8"	.03
4710	A	5/16"	7/8"	.02
4711	A	11/32"	7/8"	.03
4712	A	3/8"	7/8"	.03
4714	C	7/16"	7/8"	.04
4716	C	1/2"	7/8"	.05

NO. 4707T - NO. 4716T REGULAR LENGTH SOCKETS DOUBLE HEX. / 12-POINT

4707T	B	7/32"	7/8"	.02
4708T	B	1/4"	7/8"	.02
4709T	A	9/32"	7/8"	.02
4710T	A	5/16"	7/8"	.02
4711T	A	11/32"	7/8"	.03
4712T	A	3/8"	7/8"	.03
4714T	C	7/16"	7/8"	.04
4716T	C	1/2"	7/8"	.05



NO. 4708S - NO. 4712S REGULAR LENGTH SOCKETS DOUBLE SQUARE / 8-POINT

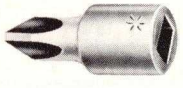
NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4708S	A	1/4"	7/8"	.02
4710S	A	5/16"	7/8"	.05
4712S	A	3/8"	7/8"	.05

NO. 4708L - NO. 4716L DEEP LENGTH SOCKETS HEXAGON / 6-POINT

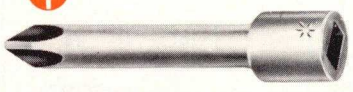
4708L	B	1/4"	2"	.05
4709L	A	9/32"	2"	.05
4710L	A	5/16"	2"	.05
4711L	A	11/32"	2"	.07
4712L	A	3/8"	2"	.09
4714L	A	7/16"	2"	.11
*4716L	A	1/2"	2"	.12

SCREWDRIVER AND SPECIAL SOCKETS

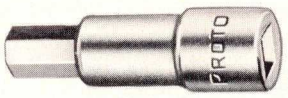
NO.	DESCRIPTION	LENGTH	WT., LBS.
4735	Clutch Head 5/32" Bit	1 1/2"	.02
4736	Clutch Head 3/16" Bit	1 1/2"	.02



4737	Screwdriver, Phillips No. 1 Bit	1 1/16"	.02
4738	Screwdriver, Phillips No. 2 Bit	1 1/16"	.02



4737L	Screwdriver, Phillips No. 1 Bit	2 1/16"	.03
4738L	Screwdriver, Phillips No. 2 Bit	2 1/16"	.03



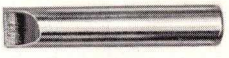
NO.	DESCRIPTION	LENGTH	WT., LBS.
4741	Hollow-Head Type, 7/32" Hex. Bit	1 13/32"	.04
*4742	Hollow-Head Type, 1/4" Hex. Bit	1 13/32"	.04

*Used in Automatic Transmission Sets.

*4743	Screwdriver, 2 3/64" x .062" Bit	3 1/32"	.03

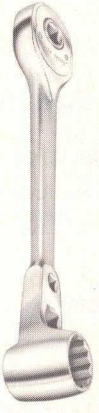
*Used in Automatic Transmission Sets.

4744	Screwdriver, 3/16" x .030" Bit	1 11/16"	.03
4745	Screwdriver, 1/4" x .030" Bit	2 7/8"	.05



4746	Screwdriver, 1/2" x .082" Bit	3"	.13

For power sockets, see pages 64 trough 77. For Metric sockets, see page 90.



OPENING IN RATCHET HEAD: 1/4" female square.

OPENINGS IN HANDLE: 3/16", 5/16", 1/4" square; 1/2" and 9/16" 12 point sockets.

NO. 4753 REFRIGERATION RATCHETING WRENCH

Turns square valve stems in refrigeration and air conditioning, including automotive. Drop forged alloy steel construction. Polished OD of head; 1/2" and 9/16" sockets. Nickel chrome plate finish. Reversing lever. Length, 6 7/32". Wt., .25 Lbs.

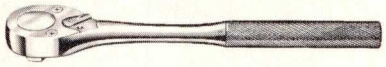
¼" SQUARE DRIVE MIDGET SOCKET WRENCH ATTACHMENTS

PROTO PROFESSIONAL TOOLS

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

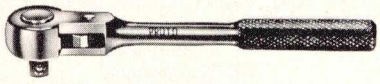
HANDLES

**Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.*



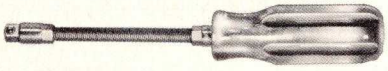
NO. 4749

DESCRIPTION	OVERALL LENGTH	WT., LBS.
Reversible Ratchet*	5 1/32"	.21



NO. 4750

Reversible Ratchet*	4½"	.16

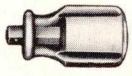


NO. 4764†

Flexible Driver, Plastic Handle	6¾"	.18

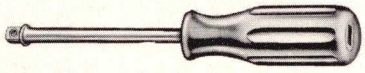
NO. 4766

Hinge Handle	5⅜"	.15



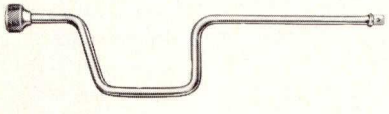
NO. 4767

Stubby Socket Driver, Plastic Handle	2 5/32"	.07



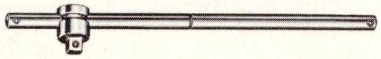
NO. 4769†

Regular Socket Driver, Plastic Handle	6⅛"	.19



NO. 4780

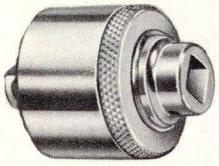
Speed Handle	16 1/16"	.39



NO. 4785

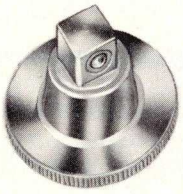
Sliding Bar T Handle	4½"	.08

†*See page 53 for No. 5267 ⅜" Driver.*



NO. 4747

DESCRIPTION	OVERALL LENGTH	WT., LBS.
Ratchet Adapter	⅝"	.40



NO. 4751
RATCHET SPINNER

Fit between ratchet and attachment. Nuts and bolts may be spun fast by hand. Socket or attachment can be turned with the fingers without moving the ratchet. Close tolerances held on female square and broached male square. Gripping edge has deep knurling. High quality alloy steel. Heat treated for strength and toughness. Polished, chrome plated.

NO.	DRIVE	HEIGHT	WT., LBS.
4751	¼"	⅞"	.06

ATTACHMENTS

NO. 4759

Extension	2"	.04

NO. 4760

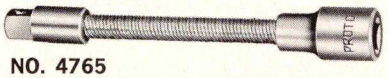
Extension	3"	.05

NO. 4761

Extension	6"	.08

NO. 4763

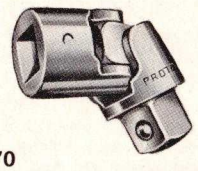
Extension	14"	.18



NO. 4765

DESCRIPTION	OVERALL LENGTH	WT., LBS.
Flexible Extension	6"	.10

Seepage 90 for Metric sizes.
See page 64 for Power & Impact sizes.

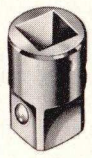


NO. 4770

Universal Joint	1 19/64"	.04

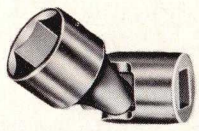
NO. 5255

Adapter, ⅜" F., ¼" M.	1"	.05



NO. 5256

Adapter, ¼" F., ⅜" M.	15/16"	.03



NO. 4771 THROUGH 4774, ¼" DRIVE 6 PT. UNIVERSAL SOCKETS

Made from PROTOLOY® special alloy steel chrome plated. Thin walls to get at hard-to-reach nuts. For jobs requiring turning of small nuts and bolts as in repair of carburetors, distributors, radios.

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4771	¼"	1 9/64"	.03
4772	5/16"	1 13/64"	.03
4773	⅜"	1 17/64"	.03
4774	7/16"	1 19/64"	.04

NOS. 4771T THROUGH 4774T UNIVERSAL DRIVE SOCKETS/ 12-POINT

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
4771T	¼"	1 9/64"	.03
4772T	5/16"	1 13/64"	.03
4773T	⅜"	1 17/64"	.03
4774T	7/16"	1 19/64"	.04

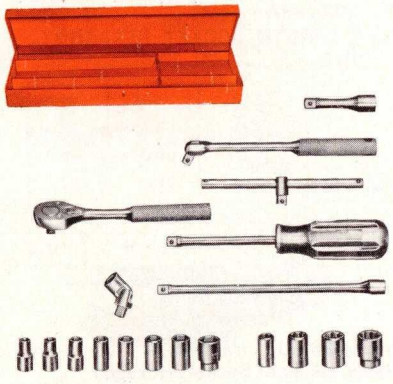
1/4" (MIDGET) AND 3/8" SQUARE DRIVE SOCKET WRENCHES AND WRENCH SETS

PROTO PROFESSIONAL TOOLS

NO. 4700 B SET

Here are complete sets of handy midget tools, designed for all kinds of light work where small nuts and bolts must be turned.

Boxes available separately, see page 110.



NO. 4700 C SET

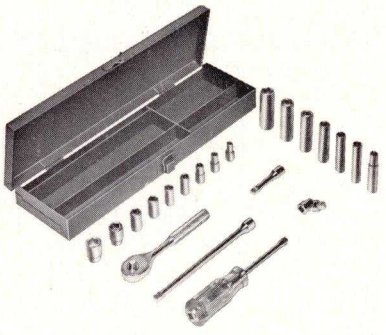
For larger set number 4700-D, see page 81.
See page 90 for Metric sizes.
See page 64 for Power & Impact sizes.

CONTENTS/NOS. 4700B AND 4700C SETS

NO.	DESCRIPTION	SET 4700 B	SET 4700 C
4706	Skt., 6-Pt., 3/16" Open.		1
4707	Skt., 6-Pt., 7/32" Open.	1	1
4708	Skt., 6-Pt., 1/4" Open.	1	1
4709	Skt., 6-Pt., 9/32" Open.	1	1
4710	Skt., 6-Pt., 5/16" Open.	1	1
4711	Skt., 6-Pt., 11/32" Open.	1	1
4712	Skt., 6-Pt., 3/8" Open.	1	1
4714	Skt., 6-Pt., 7/16" Open.	1	1
4708S	Skt., 8-Pt., 1/4" Open.	1	1
4710S	Skt., 8-Pt., 5/16" Open.	1	1
4712S	Skt., 8-Pt., 3/8" Open.		1
4716T	Skt., 12-Pt., 1/2" Open.		1
4749	Ratchet	1	1
4759	Extension, 2"		1
4761	Extension, 6"		1
4766	Hinge Handle		1
4769	Plastic Handle	1	1
4770	Universal Joint		1
4785	Sliding Bar Handle	1	1
4795	Steel Box, 6 3/4"x2 1/4"x1"	1	
4796	Metal Box		1

Weight of Set 4700 B, 1.2 Lbs.
Weight of Set 4700 C, 2.5 Lbs.

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



NO. 4700E 1/4" SQUARE DRIVE SOCKET SET

21 pieces: 9 standard sockets 3/16" to 1/2", 7 deep sockets 3/4" to 1/2", universal joint, 5" ratchet handle, 2" and 6" extensions, plastic spin handle in metal box. Wt., 2.0 Lbs.

CONTENTS/NO. 4700E SET

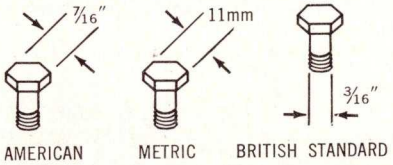
NO.	DESCRIPTION	
4706	Skt. 6-Pt., 3/16"	Open.
4707	Skt. 6-Pt., 7/32"	Open.
4708	Skt. 6-Pt., 1/4"	Open.
4709	Skt. 6-Pt., 9/32"	Open.
4710	Skt. 6-Pt., 5/16"	Open.
4711	Skt. 6-Pt., 11/32"	Open.
4712	Skt. 6-Pt., 3/8"	Open.
4714	Skt. 6-Pt., 7/16"	Open.
4716	Skt. 6-Pt., 1/2"	Open.
4708L	Dp. Skt. 6-Pt., 1/4"	Open.
4709L	Dp. Skt. 6-Pt., 9/32"	Open.
4710L	Dp. Skt. 6-Pt., 5/16"	Open.
4711L	Dp. Skt. 6-Pt., 11/32"	Open.
4712L	Dp. Skt. 6-Pt., 3/8"	Open.
4714L	Dp. Skt. 6-Pt., 7/16"	Open.
4716L	Dp. Skt. 6-Pt., 1/2"	Open.
4749	Rev. Ratchet, 5"	
4759	Extension, 2"	
4761	Extension, 6"	
4769	Plastic Handle, 6 1/8"	
4770	Universal Joint, 1 7/32"	
4796	Box, 12 1/4"x3 3/4"x1 1/4"	

NO. 4749 RK

Repair Kit for 4749.

METRIC CONVERSION TABLE

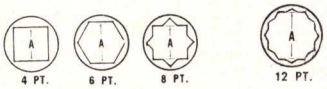
(See page 116 for complete chart.)



American and Metric wrench sizes are taken across the flats of the bolt head; British Standard size is taken from outside diameter of threads.

3/8" SQUARE DRIVE SOCKET WRENCHES

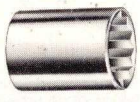
Proto sockets are made from Protoloy® special alloy steel, chrome plated, and have thin walls to get at hard-to-reach nuts.



SOCKET TYPES

REGULAR LENGTH SOCKETS DOUBLE HEXAGON / 12-POINT

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5208	B	1/4"	1 1/16"	.04
5210	B	5/16"	1 1/16"	.04
5211	B	11/32"	1 1/16"	.04
5212	B	3/8"	1 1/16"	.04
5214	A	7/16"	1 1/16"	.04
5216	A	1/2"	1 1/8"	.05
5217	C	17/32"	1 1/8"	.06
5218	C	9/16"	1 1/8"	.06
5219	C	19/32"	1 1/8"	.07
5220	C	5/8"	1 1/8"	.07
5222	C	11/16"	1 1/8"	.09
5224	C	3/4"	1 3/16"	.09
5225	C	25/32"	1 3/16"	.12
5226	C	13/16"	1 3/16"	.12
5228	C	7/8"	1 3/16"	.15



BRITISH STANDARD SOCKETS*

Most-used sizes for the repair of British cars, motorcycles, machinery, appliances.
12 PT.

3/8" DRIVE SOCKETS / 12-POINT

NO.	SIZE BOLT	SKT. SIZE	TOTAL LGTH.	WT., LBS.
5206BS	3/16	.340"	1 1/16"	.04
5208BS	1/4	.445"	1 1/16"	.06
5210BS	5/16	.525"	1 1/8"	.07
5212BS	3/8	.600"	1 1/8"	.11
5214BS	7/16	.717"	1 1/8"	.12
5216BS	1/2	.829"	1 3/16"	.13

3/8" SQUARE DRIVE SOCKET WRENCHES AND SETS

REGULAR LENGTH SOCKETS
HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5210H	B	5/16"	1 1/16"	.04
5212H	B	3/8"	1 1/16"	.05
5214H	A	7/16"	1 1/16"	.05
5216H	A	1/2"	1 1/8"	.06
5218H	C	9/16"	1 1/8"	.06
5220H	C	5/8"	1 1/8"	.07
5222H	C	11/16"	1 1/8"	.10
5224H	C	3/4"	1 3/16"	.10
5226H	C	13/16"	1 3/16"	.14
5228H	C	7/8"	1 3/16"	.17

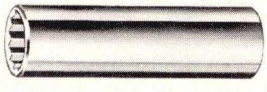
REGULAR LENGTH SOCKETS
DOUBLE SQUARE / 8-POINT

5208S	B	1/4"	1 1/16"	.04
5210S	B	5/16"	1 1/16"	.04
5212S	A	3/8"	1 1/16"	.06
5214S	A	7/16"	1 1/16"	.07
5216S	A	1/2"	1 1/8"	.10

REGULAR LENGTH SOCKETS
SQUARE / 4-POINT

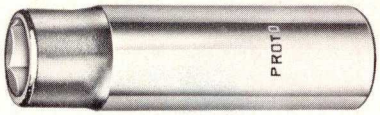
*5209S	B	9/32"	1 1/16"	.05

*For Buick Dynaflow Torque Converter Drain Plug and 1/8" Pipe Plugs.



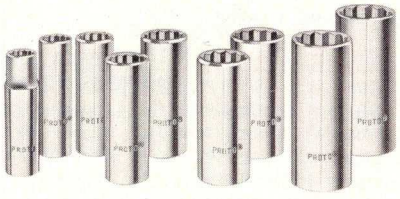
DEEP LENGTH SOCKETS
DOUBLE HEXAGON / 12-POINT

5012	B	3/8"	2 1/8"	.10
5014	A	7/16"	2 1/8"	.10
5016	A	1/2"	2 1/8"	.10
5018	A	9/16"	2 1/8"	.14
5020	A	5/8"	2 1/8"	.15
5022	A	11/16"	2 1/8"	.19
5024	A	3/4"	2 1/8"	.21
5026	A	13/16"	2 1/2"	.28
5028	A	7/8"	2 1/2"	.27



DEEP LENGTH SOCKETS
HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5012H	B	3/8"	2 1/8"	.10
5014H	A	7/16"	2 1/8"	.10
5016H	A	1/2"	2 1/8"	.11
5018H	A	9/16"	2 1/8"	.14
5020H	A	5/8"	2 1/8"	.16
5022H	A	11/16"	2 1/8"	.21
5024H	A	3/4"	2 1/8"	.23
5026H	A	13/16"	2 1/2"	.30
5028H	A	7/8"	2 1/2"	.31
5026HPA	A	13/16"	2 1/2"	.28
5026RA	Rubber insert for 5026HPA			.01



NO. 5000B DEEP SOCKET SET

Includes the following nine extra deep 12-point sockets, packed in cardboard box.

NO.	OPENING SIZE	NO.	OPENING SIZE
5012	3/8"	5022	11/16"
5014	7/16"	5024	3/4"
5016	1/2"	5026	13/16"
5018	9/16"	5028	7/8"
5020	5/8"	Weight, 1.66 Lbs.	

NO. 5020-50
5/8" HEX SPARK PLUG SOCKET

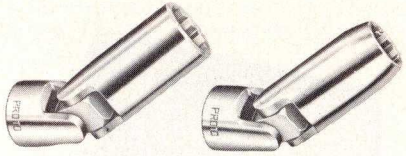
3/8" square drive for removal and installation of 5/8" spark plugs on some General Motors cars; tractors, outboard motors, stationary and portable engines, and lawn mowers.

Specially designed fitted rubber insert, holds 5/8" spark plugs securely, prevents porcelain damage. Special alloy steel construction permits "thin wall" socket design, for more effective use in confined areas. Solid 3/4" male hex for optional flat wrench use. Wide knurled band for better fingertip grip. Polished chrome rust resistant finish.

Hex Spark Plug Socket also available in 1/2" drive size. See page 55.

NO.	DRIVE SIZE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5020-50	3/8"	5/8" Hex	2 1/2"	.23

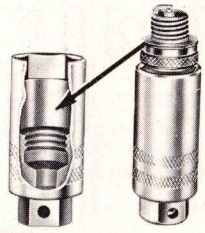
No. 5021-51. Rubber Insert Replacement for above socket. Packed 6 per box.



TYPE A TYPE B

NOS. 5274LH THROUGH 5276LH
UNIVERSAL SOCKETS
DEEP LENGTH / 6-POINT

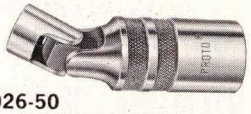
NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5274LH	B	7/16"	2 3/8"	.69
5275LH	A	1/2"	2 3/8"	.69
5276LH	A	9/16"	2 3/8"	.81



NO. 5026HPA *
DEEP LENGTH SOCKET HEXAGON / 6-POINT

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5026 HPA	13/16"	2 1/2"	.27

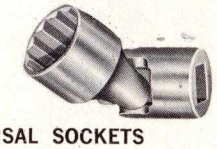
*No. 5326 HPA— Also available in 1/2" dr.— See page 55.



No. 5026-50
Universal Joint Socket / Hexagon

When you have to remove and replace spark plugs at an angle, this tool gets the job done faster. Under manifolds, in canted engine blocks, in cars equipped with air conditioning units — these are the areas where its convenience is a great advantage. Plug holding rubber insert holds and protects spark plug. Thinwall construction. Precision broached hex opening. Nickel chrome-plated.

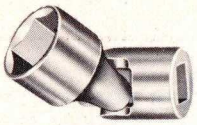
NO.	DRIVE SIZE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5026-50	3/8"	13/16"	3 1/8"	.4



UNIVERSAL SOCKETS
DOUBLE HEXAGON / 12-POINT

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5273	3/8"	1 17/32"	.09
5274	7/16"	1 17/32"	.09
5275	1/2"	1 5/8"	.10
5276	9/16"	1 25/32"	.13
5277	5/8"	1 29/32"	.17
5278	11/16"	1 63/64"	.17
5279	3/4"	2 3/64"	.19

3/8" SQUARE DRIVE SOCKET WRENCHES / ATTACHMENTS



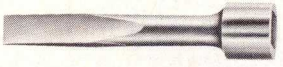
UNIVERSAL SOCKETS
HEXAGON / 6-POINT

5272H	5/16"	1 35/64"	.09
5273H	3/8"	1 35/64"	.10
5274H	7/16"	1 17/32"	.09
5275H	1/2"	1 5/8"	.10
5276H	9/16"	1 25/32"	.13
5277H	5/8"	1 61/64"	.17
5278H	11/16"	1 63/64"	.17
5279H	3/4"	2 3/64"	.19

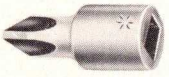
SCREWDRIVER SOCKETS

See page 87 for Metric sizes.
See page 65 for Power & Impact sizes.

NO.	SIZE OF BIT	LENGTH	WT., LBS.
5235	Clutch Hd. 1/4" Bit	2"	.07
5236	Clutch Hd. 5/16" Bit	2"	.08
5237	Clutch Hd. 3/8" Bit	2"	.08



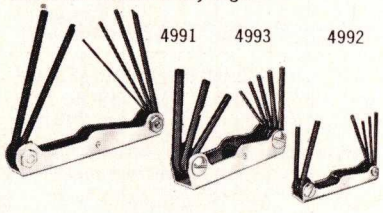
5240	5/16" x .040"	3 1/4"	.08



5241	Phillips No. 2	1 5/8"	.05
5242	Phillips No. 3	1 5/8"	.05
5243	Phillips No. 4	1 5/8"	.06

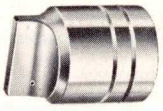
HOLLOW HEAD WRENCH SETS *

6, 7 and 8 blade sets. Holder serves as handle for more torque. Cold drawn alloy steel, heat treated and hardened for long wear, especially on the tips. Rests comfortably in the hand so that it can be used at any angle.

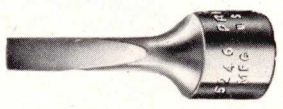


See page 45, Nos. 4977, 4978, Wrench Sets

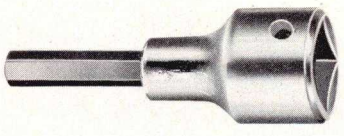
NO.	DESCRIPTION		SIZES		WT., LBS.
4991	6 1/2" Handle 5" Blades	3/32" 1/8"	5/32" 3/16"	7/32" 1/4"	.68
4993	3 3/4" Handle 3" Blades	3/32" 7/64" 1/8"	9/64" 5/32" 3/16"	7/32" 1/4"	.41
4992	3" Handle 2" Blades	.050" 1/16"	5/64" 3/32"	1/8" 5/32"	.21



NO.	SIZE OF BIT		LENGTH	WT., LBS.
5244	11/16"	.116"	1 1/32"	.07



5246	1/4"	.030"	1 7/8"	.05



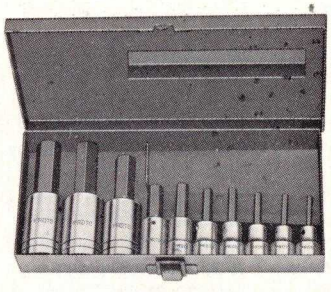
NOS. 4990 1/8 THROUGH 4990 3/8 L
HOLLOW HEAD SCREW SOCKETS

• NO.	HEX BIT SIZE	USABLE BIT LENGTH	OVERALL LENGTH	WT., LBS.	BIT ONLY NO.
*4990 1/8	1/8"	1"	2 1/16"	.05	4980
*4990 5/32	5/32"	1"	2 1/16"	.06	4981
*4990 3/16	3/16"	1"	2 1/16"	.06	4982
†4990 3/16 L	3/16"	2"	3 1/16"	.07	4983
*4990 7/32	7/32"	1"	2 5/32"	.08	4984
*4990 1/4	1/4"	1"	2 5/32"	.09	4985
†4990 1/4 L	1/4"	1 1/2"	2 21/32"	.10	4986
*4990 5/16	5/16"	1"	2 1/4"	.11	4987
*4990 3/8	3/8"	1"	2 1/4"	.13	4988
†4990 3/8 L	3/8"	2 11/16"	3 15/16"	.19	4989

*See Set No. 4900A, page 53. Larger size bits, 1/2" drive, see page 55.

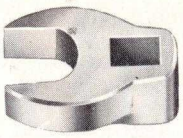
▪*Catalog Number includes Bit-Holding Socket and Bit. Sockets without Bits are not available. Replacement Bits only may be ordered by the numbers in the right column.*

†*4990 3/16 L is for GM Automatic Transmissions, 4990 1/4 L is for Chevrolet Camber Adjustment, and 4990 3/8 L is for Ford Brakes and Ford and Mercury Differential Filler Plugs.*



NO. 4900A SET
HOLLOW HEAD SCREW SOCKETS

No. 4997 box holds 10 hollow head sockets: Seven 3/8" drive with bits 1/8" through 3/8", three 1/2" drive with bits 1/2", 9/16", 5/8". See asterisk items* pages 53 and 55 for individual sockets. Wt., 2.84 lbs.



CROWFOOT WRENCHES

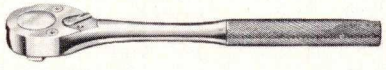
Reach starters. Do jobs that normally need special tools.

NO.	NOMINAL OPENING SIZE	TOTAL LENGTH	WT., LBS.
4912	3/8"	1 9/64"	.05
4914	7/16"	1 9/64"	.05
4916	1/2"	1 1/8"	.05
4918	9/16"	1 13/32"	.08
4920	5/8"	1 25/64"	.08
4922	11/16"	1 25/64"	.08
4924	3/4"	1 21/32"	.12
4926	13/16"	1 21/32"	.12
4928	7/8"	1 41/64"	.12
4932	1"	1 57/64"	.19
4940	1 1/4"	2 1/32"	.26
4944	1 3/8"	1 63/64"	.23

HANDLES AND ATTACHMENTS

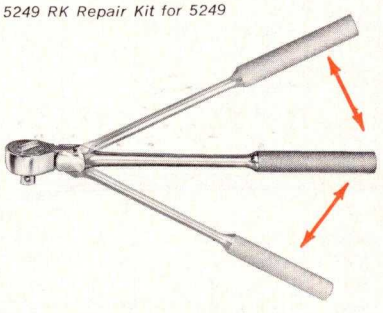
Proto handles and attachments permit a wide variety of drive combinations for fast and easy running of nuts and bolts on every job. They're made of special alloy steel, chrome plated, built for years of service. Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

HANDLES



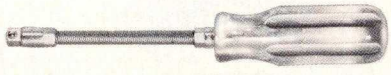
NO.	DESCRIPTION	LENGTH	WT., LBS.
5249	Reversible Ratchet	7"	.55

5249 RK Repair Kit for 5249



5257	Hinge Handle Ratchet	11"	.83
5257-50	Plug Assembly	—	.20

5265	Hinge Handle	7 3/8"	.39
5266	Hinge Handle	12"	.83

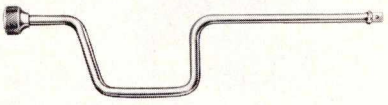


5267	Flexible Driver	9"	.37

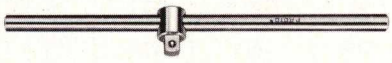
3/8" SQUARE DRIVE SOCKET WRENCH HANDLES / ATTACHMENTS / SETS

PROTO PROFESSIONAL TOOLS

HANDLES (Cont.)



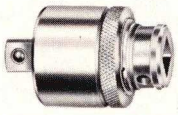
NO.	DESCRIPTION	LENGTH	WT., LBS.
5280	Speed Handle	16 7/8"	.83



5285	Sliding-Bar T Handle	8"	.31

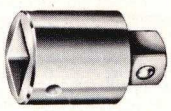
ATTACHMENTS

Fedl. Specs.: GGG-W-641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



NO.	DESCRIPTION	LENGTH	WT., LBS.
5247	Ratchetor	2"	.34
*5251	Ratchet Spinner 3/8" Dr.	1 1/4"	.18

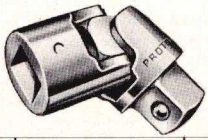
5253	Adapter, 3/8" Female, 1/2" Male	15/32"	.07
5256	Adapter, 1/4" Female, 3/8" Male	15/16"	.03



5254	Adapter, 1/2" Female, 3/8" Male	1 13/32"	.10
5255	Adapter, 3/8" Female, 1/4" Male	1 1/32"	.05

5259	Extension Bar	1 3/4"	.09
5260	Extension Bar	3"	.13
5261	Extension Bar	7 1/2"	.25
5262	Extension Bar	12"	.38
5263	Extension Bar	17 3/16"	.53

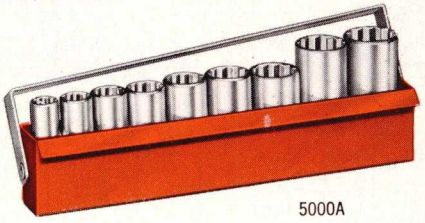
5268	Flexible Extension	8"	.26



5270	Universal Joint	1 11/16"	.10

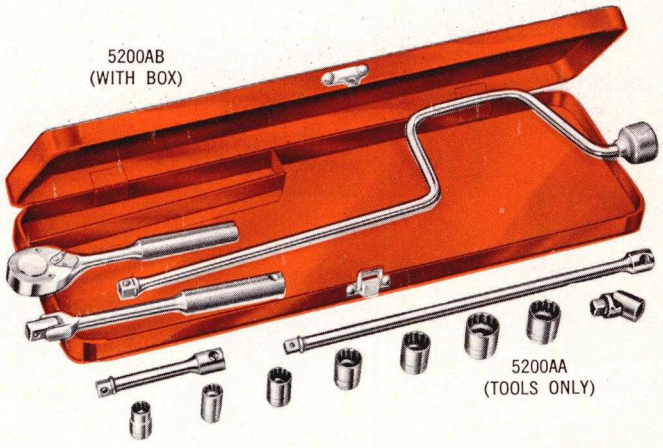
See page 50 No. 4751 for full description.

See page 91 for Metric sizes.
See page 65 for Power & Impact sizes.



5000A

5200AB
(WITH BOX)



5200AA
(TOOLS ONLY)

5200D

CONTENTS OF SETS 5000 A, 5200 AA, 5200 AB, & 5200 D

NO.	DESCRIPTION	SET 5000 A	SET 5200 AA	SET 5200 AB	SET 5200 D	SET 5200G
5012	Deep Socket, 12-Point, 3/8" Opening	1				
5014	Deep Socket, 12-Point, 7/16" Opening	1				
5016	Deep Socket, 12-Point, 1/2" Opening	1				
5018	Deep Socket, 12-Point, 9/16" Opening	1				
5020	Deep Socket, 12-Point, 5/8" Opening	1				
5022	Deep Socket, 12-Point, 11/16" Opening	1				
5024	Deep Socket, 12-Point, 3/4" Opening	1				
5026	Deep Socket, 12-Point, 13/16" Opening	1				
5028	Deep Socket, 12-Point, 7/8" Opening	1				
5096	Metal Tray	1				
5210	Socket, 12-Point, 5/16" Opening				1	
5212	Socket, 12-Point, 3/8" Opening		1	1	1	
5214	Socket, 12-Point, 7/16" Opening		1	1	1	
5216	Socket, 12-Point, 1/2" Opening		1	1	1	
5218	Socket, 12-Point, 9/16" Opening		1	1	1	
5219	Socket, 12-Point, 19/32" Opening				1	
5220	Socket, 12-Point, 5/8" Opening		1	1	1	
5222	Socket, 12-Point, 11/16" Opening		1	1	1	
5224	Socket, 12-Point, 3/4" Opening		1	1	1	
5226	Socket, 12-Point, 13/16" Opening				1	
5228	Socket, 12-Point, 7/8" Opening				1	
5249	Reversible Ratchet, 7" Long		1	1		
5260	Extension Bar, 3 1/2" Long		1	1		
5262	Extension Bar, 12" Long		1	1		
5265	Hinge Handle, 7 3/8" Long		1	1		
5270	Universal Joint		1	1		
5280	Speed Handle, 16 7/8" Long		1	1		
5292	Metal Tray				1	
5295	Box 18 1/2" x 5 1/4" x 1 1/2"			1		
	Weight of Sets	2.42 Lbs.	3.20 Lbs.	5.54 Lbs.	1.30 Lbs.	

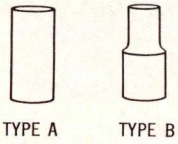
SEE PAGE 81

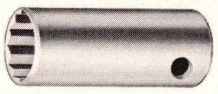
½" SQUARE DRIVE SOCKET WRENCHES AND SETS

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

1/2" SQUARE DRIVE SOCKET WRENCHES

SOCKET TYPES

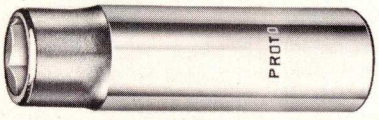




NO. 5316 - 5340 DEEP LENGTH SOCKETS DOUBLE HEXAGON/ 12-POINT

NO.	TYPE	NOM. OPEN.	TOTAL LGTH.	WT., LBS.
5316	B	½"	3¼"	.25
5318	B	9/16"	3¼"	.27
5320	A	⅝"	3¼"	.32
5322	A	11/16"	3¼"	.34
5324	A	¾"	3¼"	.40
†5326	A	13/16"	3¼"	.40
5328	A	⅞"	3¼"	.44
5330	A	15/16"	3¼"	.52
5332	A	1"	3¼"	.60
5334	A	1 1/16"	3¼"	.68
5336	A	1⅛"	3¼"	.75
5340	A	1¼"	3¼"	.92

†Use hexagon (6-point) deep length socket wrenches Nos. 5326H or 5326HPA, which have maximum clearance for 14 mm spark plugs.



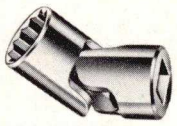
NO. 5316H THROUGH 5332H ½" DRIVE DEEP LENGTH SOCKETS/6-POINT

Protoloy® special alloy steel, chrome plated, scientifically heat treated. 6 per box.

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5316H	½"	3¼"	.26
5318H	9/16"	3¼"	.28
5320H	⅝"	3¼"	.31
5322H	11/16"	3¼"	.33
5324H	¾"	3¼"	.38
†5326H	13/16"	3¼"	.33
5328H	⅞"	3¼"	.48
5330H	15/16"	3¼"	.50
5332H	1"	3¼"	.65

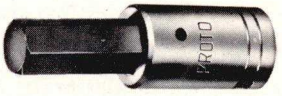
†Use hexagon (6-point) deep length socket wrenches Nos. 5326H or 5326HPA, which have maximum clearance for 14 mm spark plugs.

See page 93 for Metric sizes.
See page 66 for Power & Impact sizes.



NO. 5475 - 5477 UNIVERSAL SOCKETS DOUBLE HEXAGON/ 12-POINT

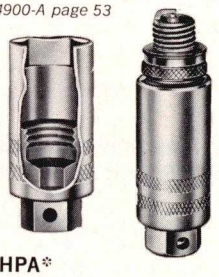
NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5475	B	½"	2 9/64"	.24
5476	B	9/16"	2 11/64"	.25
5477	B	⅝"	2 19/64"	.25



NO. 5441½ TO 5441⅝ HOLLOW HEAD SCREW SOCKETS

HEX BIT NO.	HEX BIT SIZE	TOTAL LENGTH	WT., LBS.	BIT ONLY NO.
*5441½	½"	3⅛"	.37	5441½B
*5441 9/16	9/16"	3⅜"	.48	5441 9/16B
*5441⅝	⅝"	3⅜"	.52	5441⅝B

See set No. 4900-A page 53



NO. 5326HPA* DEEP LENGTH SOCKET HEXAGON/ 6-POINT

NO.	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5326HPA	13/16"	2½"	.27

**No. 5026HPA — also available in ⅜" drive size. See page 52.*

NO. 5320-50 ⅝" HEX SPARK PLUG SOCKET ½" SQUARE DRIVE

For removal and installation of ⅝" spark plugs on some General Motors cars; tractors, outboard motors, stationary and portable engines, and lawn mowers.

NO.	DRIVE SIZE	NOM. OPEN.	TOTAL LENGTH	WT., LBS.
5320-50	½"	⅝" Hex	2½"	.21

No. 5021-51 rubber insert replacement for above socket.

Hex spark plug socket also available in ⅜" drive size. See page 52.

NO. 5412 - 5440 ½" DRIVE REGULAR LENGTH SOCKETS DOUBLE HEXAGON/ 12-POINT

Protoloy special alloy steel, chrome plated, scientifically heat treated.

NO.	TYPE	NOMINAL OPENING	TOTAL LENGTH	WT., LBS.
5412	B	⅜"	1 7/16"	.09
5414	B	7/16"	1 7/16"	.09
5416	B	½"	1 7/16"	.10
5418	B	9/16"	1½"	.13
5419	A	19/32"	1½"	.13
5420	A	⅝"	1½"	.15
5421	A	21/32"	1½"	.15
5422	A	11/16"	1½"	.17
5424	A	¾"	1½"	.20
5425	A	25/32"	1½"	.22
5426	A	13/16"	1½"	.20
5428	A	⅞"	1 9/16"	.30
5429	A	29/32"	1 9/16"	.34
5430	A	15/16"	1 9/16"	.33
5431	A	31/32"	1 9/16"	.34
5432	A	1"	1 9/16"	.38
5434	A	1 1/16"	1⅝"	.42
5436	A	1⅛"	1¾"	.50
5438	A	1 3/16"	1¾"	.56
5440	A	1¼"	1¾"	.61

NO. 5412H - 5440H ½" DRIVE REGULAR LENGTH SOCKETS HEXAGON/ 6-POINT

Protoloy® special alloy steel, chrome plated, scientifically heat treated.

5412H	B	⅜"	1 7/16"	.09
5414H	B	7/16"	1 7/16"	.10
5416H	B	½"	1 7/16"	.12
5418H	B	9/16"	1½"	.13
5420H	A	⅝"	1½"	.14
5422H	A	11/16"	1½"	.18
5424H	A	¾"	1½"	.21
5426H	A	13/16"	1½"	.22
5428H	A	⅞"	1 9/16"	.30
5430H	A	15/16"	1 9/16"	.32
5432H	A	1"	1 9/16"	.38
5434H	A	1 1/16"	1⅝"	.42
5436H	A	1⅛"	1¾"	.53
5438H	A	1 3/16"	1¾"	.60
5440H	A	1¼"	1¾"	.64

NO. 5412S - 5434S ½" DRIVE REGULAR LENGTH SOCKETS DOUBLE SQUARE/ 8-POINT

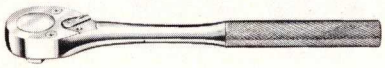
Protoloy special alloy steel, chrome plated, scientifically heat treated.

5412S	B	⅜"	1 7/16"	.12
5414S	B	7/16"	1 7/16"	.14
5416S	A	½"	1 7/16"	.14
5418S	A	9/16"	1½"	.20
5420S	A	⅝"	1½"	.23
5422S	A	11/16"	1½"	.30
5424S	A	¾"	1½"	.37
5426S	A	13/16"	1⅝"	.42
5428S	A	⅞"	1⅝"	.52
5432S	A	1"	1¾"	.76
5434S	A	1 1/16"	1¾"	.91

½" SQUARE DRIVE SOCKET WRENCHES ATTACHMENTS / HANDLES

PROTO® PROFESSIONAL TOOLS

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



NO. 5449 REVERSIBLE RATCHET

Standard Proto ratchet design insures maximum efficiency and minimum wear. Easily reversed with flip of thumb. Proto's years of experience insures safe and dependable operation. Drop forged from Protoloy® steel, highly polished and nickel chrome plated.

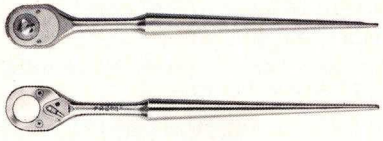
Length, 10¼". Wt., Lbs., 1.32.

NO. 5450

Long Reversible Ratchet
Length, 15¾". Wt., Lbs., 1.82.

NO. 5449RK

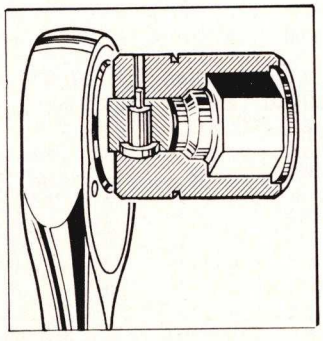
Repair Kit for 5449 & 5450.



NO. 5449-14 ½" SQUARE DRIVE RATCHETING SPUD WRENCH

Incorporates features of both spud wrenches and ratchets. The "spud" end will align bolt or rivet holes from ⅜" to 1" while the ½" drive reversible ratchet will accept sockets from ⅜" to 1¼" opening. Ideal for riggers, steel men, fabricators, ship fitters, construction men or anyone doing aligning and bolting jobs.

Length, 14". Wt., 1.55 Lbs.



POSITIVE LOCK

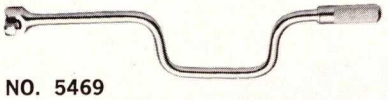
Disc, spring and pellet can be easily replaced with hammer and punch. Sockets with drilled ball hole feature remain "locked on" until pellet is depressed and socket removed.

HANDLES

These husky Proto handles are made from Protoloy® special alloy steel and are chrome plated.

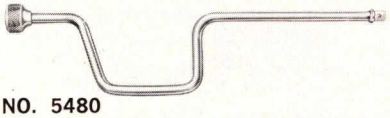
NOS. 5466, 5467, 5468

Hinge Handle, with hole for inserting pin handle
No. 5466—Length, 10⅝". Wt., Lbs., 1.16.
No. 5467—Length, 15". Wt., Lbs. 1.50.
No. 5468—Length, 18½". Wt., Lbs., 1.68.



NO. 5469

Speed Hinge Handle, 9/16" stock, 6½" swing diam., ball-brg. knurled grip
Length, 18". Wt., Lbs., 1.86.



NO. 5480

Speed Handle, ½" stock, 7" swing diam., ball-bearing knurled grip.
Length, 18". Wt., Lbs., 1.52.

NO. 5485

Sliding Bar T Handle, with ball to hold plug in tee or offset position
Length, 12 15/16". Wt., Lbs., .95.

½" SQUARE DRIVE STANDARD SOCKET WRENCH ATTACHMENTS

Made from Protoloy® special alloy steel, chrome plated, designed for precise and complete interchangeability with wide range of combinations for special jobs.

ATTACHMENTS

NOS. 5253, 5653

No. 5253—Adapter, ⅜" female, ½" male
Length, 15/32". Wt., Lbs., .07.
No. 5653—Adapter, ½" female, ¾" male
Length, 19/16". Wt., Lbs., .22.

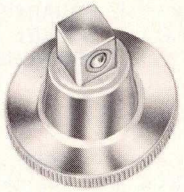
NOS. 5254, 5453

No. 5254—Adapter, ½" female, ⅜" male
Length, 1 13/32". Wt., Lbs., .10.
No. 5453—Adapter, ¾" female, ½" male
Length, 2⅛". Wt., Lbs., .38.

*NO. 5447

"Ratchetor" Ratcheting Attachment
Length, 2 21/32". Wt., Lbs., .84.

*For description of "ratchetor" see page 58.



NO. 5451*

Ratchet Spinner
½" Square Drive
Length, 1⅝". Wt., Lbs., .30.

NO. 5460

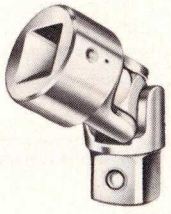
Extension Bar
Length, 2½". Wt., Lbs., .24.

NO. 5461

Extension Bar
Length, 5". Wt., Lbs., .35.

NOS. 5463, 5464, 5465

Extension Bar
No. 5463—Length, 10". Wt., Lbs., .63.
No. 5464—Length, 20". Wt., Lbs., 1.03.
No. 5465—Length, 36". Wt., Lbs., 3.10.



NO. 5470

Universal Joint
Length, 2 39/64"
Wt., Lbs., .29.

NO. 5444, 5446 SCREWDRIVER SOCKETS

Used on drag links and large screws of many assemblies.

NO.	BIT SIZE	TOTAL LENGTH	WT., LB.
5444	1 1/32" x .115"	1¼"	.11
5446	1 1/32" x .156"	1¼"	.17

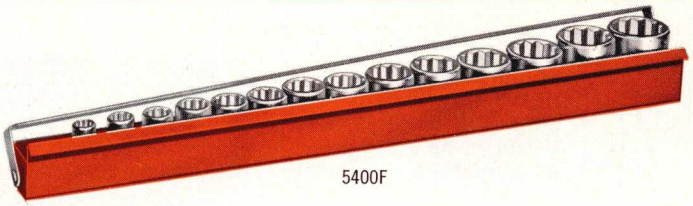
See page 114 for spare parts listing.

*See page 50 No. 4751 for full description.

½" SQUARE DRIVE SOCKET WRENCH SETS

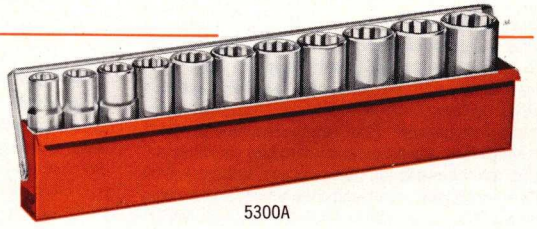
PROTO PROFESSIONAL TOOLS

See page 93 for Metric sizes.
See page 66 for Power & Impact sizes.
Fedl. Spec.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.



5400F

5400AB



5300A

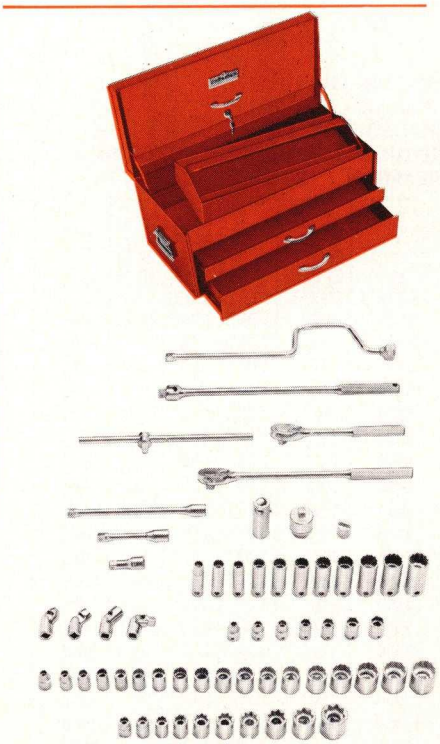
*5400-AA (TOOLS ONLY)

CONTENTS OF SETS

NO.	DESCRIPTION	SET 5300-A		SETS 5400-AB *5400-AA	SET 5400-OC	SET 5400-F
5316	Deep Socket, 12-point, ½" opening	1				
5318	Deep Socket, 12-point, 9/16" opening	1				
5320	Deep Socket, 12-point, 5/8" opening	1				
5322	Deep Socket, 12-point, 11/16" opening	1				
5324	Deep Socket, 12-point, ¾" opening	1				
5326	Deep Socket, 12-point, 13/16" opening	1				
5328	Deep Socket, 12-point, 7/8" opening	1				
5330	Deep Socket, 12-point, 15/16" opening	1				
5332	Deep Socket, 12-point, 1" opening	1				
5334	Deep Socket, 12-point, 1 1/16" opening	1				
5336	Deep Socket, 12-point, 1 1/8" opening	1				
5393	Metal Tray (.94 lbs.)	1				
5414	Socket, 12-point, 7/16" opening			1	1	1
5416	Socket, 12-point, ½" opening			1	1	1
5418	Socket, 12-point, 9/16" opening			1	1	1
5419	Socket, 12-point, 19/32" opening				1	1
5420	Socket, 12-point, 5/8" opening			1	1	1
5421	Socket, 12-point, 21/32" opening				1	
5422	Socket, 12-point, 11/16" opening			1	1	1
5424	Socket, 12-point, ¾" opening			1	1	1
5425	Socket, 12-point, 25/32" opening				1	1
5426	Socket, 12-point, 13/16" opening			1	1	1
5428	Socket, 12-point, 7/8" opening			1	1	1
5430	Socket, 12-point, 15/16" opening			1	1	1
5431	Socket, 12-point, 31/32" opening				1	
5432	Socket, 12-point, 1" opening			1	1	1
5434	Socket, 12-point, 1 1/16" opening				1	1
5436	Socket, 12-point, 1 1/8" opening				1	1
5438	Socket, 12-point, 1 3/16" opening				1	
5440	Socket, 12-point, 1¼" opening				1	1
5449	Reversible Ratchet, 10" long			1	1	
5460	Extension Bar, 2½" long				1	
5461	Extension Bar, 5" long			1	1	
5463	Extension Bar, 10" long			1	1	
5467	Hinge Handle, 15" Long			1		
5468	Hinge Handle, 17 7/8" long				1	
5470	Universal Joint			1	1	
5480	Speed Handle, 18" long			1	1	
5493	Metal Tray (1.0 lbs.)					1
5496	Hip Roof Box, 18½" x 5¾" x 3⅝" (Wt. 3 lbs. 4 oz.) (Boxes available separately. See page 106)			1	1	
	Weight of Sets, lbs.	6.00		11.66	15.20	5.00

*5400-AA is same as 5400-AB but without metal box. Wt., 8.34 Lbs.

5400-OC



NO. 5400-E 61 PIECE ½" SQUARE DRIVE MASTER SOCKET SET

See page 82 for complete listing.

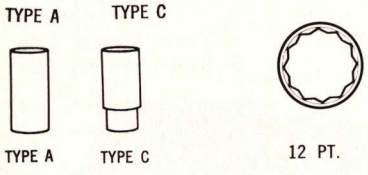
¾" SQ. DR. HEAVY DUTY SOCKET WRENCHES ATTACHMENTS / HANDLES

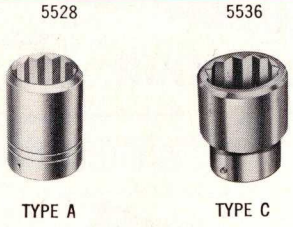
PROTO® PROFESSIONAL TOOLS

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

3/4" SQUARE DRIVE HEAVY DUTY SOCKET WRENCHES, HANDLES AND ATTACHMENTS

Proto sockets are made from Protoloy® special alloy steel, chrome plated, and have thin walls to get at hard-to-reach nuts. They are used by mechanics and industrial workers who need strength, power, speed and safe operation on really tough jobs. They are essential for the maintenance and installation of heavy machinery and for the repair of trucks, buses, ground service equipment, automobiles, tractors and farm implements. They provide maximum strength with minimum weight and are the perfect wrenches to break loose frozen bolts and nuts on heavy equipment.

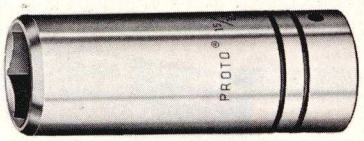




NOS. 5528 - 34 TYPE A
NOS. 5536 - 76 TYPE C

¾" SQUARE DRIVE REGULAR LENGTH SOCKETS DOUBLE HEXAGON / 12-POINT

NO.	NOMINAL OPENING SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5528	7/8"	1.06"	1.31"	2"	.40
5530	15/16"	1.06"	1.42"	2"	.50
5532	1"	1.06"	1.50"	2"	.54
5534	1 1/16"	1.00"	1.57"	2"	.58
5536	1 1/8"	1.25"	1.63"	2 3/16"	.66
5538	1 3/16"	1.06"	1.70"	2 1/4"	.72
5540	1 1/4"	1.16"	1.83"	2 1/4"	.73
5542	1 5/16"	1.09"	1.89"	2 5/16"	.88
5544	1 3/8"	1.13"	1.95"	2 5/16"	.92
5546	1 7/16"	1.22"	2.01"	2 3/8"	.98
5548	1 1/2"	1.31"	2.07"	2 1/2"	1.10
5550	1 9/16"	1.38"	2.14"	2 5/8"	1.28
5552	1 5/8"	1.44"	2.26"	2 5/8"	1.44
5554	1 11/16"	1.50"	2.39"	2 3/4"	1.62
5556	1 3/4"	1.50"	2.39"	2 3/4"	1.50
5558	1 13/16"	1.63"	2.51"	2 7/8"	1.68
5560	1 7/8"	1.72"	2.64"	3"	2.00
5564	2"	1.78"	2.76"	3 1/8"	2.16
5568	2 1/8"	1.88"	2.95"	3 1/4"	2.76
5570	2 3/16"	1.84"	3.01"	3 1/4"	2.76
5572	2 1/4"	1.97"	3.16"	3 3/8"	3.36
5576	2 3/8"	2.19"	3.28"	3 5/8"	3.60



NO. 5530HL - 5552HL ¾" SQUARE DRIVE DEEP LENGTH SOCKETS / 6-POINT

Deep length for bolt clearance. Hex opening for greater power. Protoloy® steel for great toughness. Openings hot-broached to close tolerances. Polished and chrome plated for rust prevention.

NO.	NOMINAL OPENING SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5530HL	15/16"	.69"	1.38"	3 1/2"	.78
5532HL	1"	.69"	1.44"	"	.82
5534HL	1 1/16"	.78"	1.56"	"	.97
5536HL	1 1/8"	.78"	1.63"	"	1.04
5540HL	1 1/4"	.91"	1.75"	"	1.16
5542HL	1 5/16"	.94"	1.88"	"	1.30
5544HL	1 3/8"	1.00"	1.94"	"	1.40
5546HL	1 7/16"	1.06"	2.00	"	1.42
5548HL	1 1/2"	1.06"	2.06"	"	1.52
5552HL	1 5/8"	1.19"	2.25"	"	1.78

ATTACHMENTS

NO. 5647

"Ratchetor" Racheting Attachment
Length, 3 13/16". Wt., Lbs., 2.33.
Converts any ¾" square drive non-ratcheting handle or attachment into a racheting device. It is used mainly with a hinge handle, hinge handle plus extension bar or a torque wrench. The "Ratchetor" is a simple, positive device, huskily built for high torque strength, yet compact for ample clearance. Reversing mechanism is positive and built for years of uninterrupted use. Newly designed for maximum strength. Precision engineered, 30 tooth ratcheting mechanism, allowing operation in 12 degree arc.

5653

5853

NO. 5653

Adapter, ½" female, ¾" male
Length, 1 9/16". Wt., Lbs., .22.

NO. 5853

Adapter, ¾" female, 1" male
Length, 2 3/8". Wt., Lbs., .70.

NOTE: For standard nut and bolt sizes corresponding to nominal socket openings see chart page 115.

See page 69 for Power & Impact sizes.

NO. 5453

Adapter, ¾" female, ½" male
Length, 2 1/8". Wt., Lbs., .38.

NO. 5854

Adapter, 1" female, ¾" male
Length, 2 3/4". Wt., Lbs., 1.34.

NO. 5660

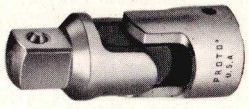
Extension Bar
Length, 4". Wt., Lbs., .91.

NO. 5661

Extension Bar
Length, 8". Wt., Lbs., 1.36.

NO. 5663

Extension Bar
Length, 16". Wt., Lbs., 2.24.



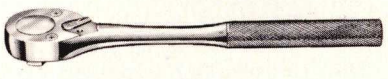
NO. 5670

Universal Joint
Length, 3 5/8". Wt., Lbs., .96.

¾" SQUARE DRIVE HEAVY DUTY SOCKET WRENCH HANDLES

Made from fine Protoloy® steel, heat treated scientifically to provide great strength and toughness, and chrome plated to prevent rust and corrosion. Proto ratchets are famous for simple, trouble-free mechanism.

HANDLES



*NO. 5649

Reversible Ratchet
Length, 20". Wt., Lbs., 5.90.

**Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.*

NO. 5649RK

Repair Kit for 5649.

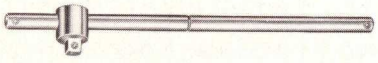
See page 114 for spare parts listing.

¾″ / 1″ SQUARE DRIVE SOCKET WRENCHES / HANDLES / SETS

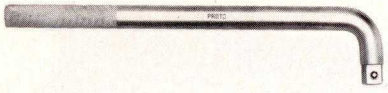
PROTO PROfessional TOols

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.
See page 95 for Metric sizes.
See page 69 for Power & Impact sizes.

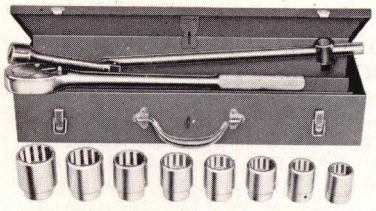
NO. 5668
Hinge Handle, with hole for inserting pin handle
Length, 20⅞″. Wt., Lbs., 3.90.



NO. 5685
Sliding Bar T Handle, with ball to hold plug in tee or offset position
Length, 18½″. Wt., Lbs., 3.10.



NO. 5686
Ell Handle
Length, 16″. Wt., Lbs., 3.80.



NO. 5500NR BASIC HEAVY DUTY SOCKET SET
Basic set of eight most-used sockets and attachments for work on heavy machinery and automatic equipment. 1 1/16″ through 1¾″ openings. Wt., 30 lbs.

CONTENTS/NO. 5500NR SET

NO.	DESCRIPTION
5534	Socket, 12-point, 1 1/16″ opening
5536	Socket, 12-point, 1⅛″ opening
5540	Socket, 12-point, 1¼″ opening
5542	Socket, 12-point, 1 5/16″ opening
5546	Socket, 12-point, 1 7/16″ opening
5548	Socket, 12-point, 1½″ opening
5552	Socket, 12-point, 1⅝″ opening
5556	Socket, 12-point, 1¾″ opening
5649	Reversible Ratchet, 20″ long
5661	Extension Bar, 8″ long
5685	Sliding Bar Handle, 18½″
5695	Steel Box, 22½″ x 8″ x 3¾″

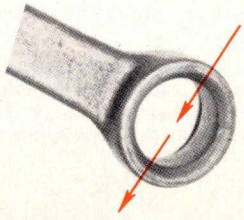
NO. 5500A HEAVY DUTY SOCKET SET
Designed for tough service; this set contains a full line of ¾″ drive sockets; is ideal for all types of heavy work. It includes 22 sockets with openings from ⅞″ to 2⅜″, three handles, three extension bars and a universal joint in a rugged steel box. Wt., 70 lbs.

CONTENTS/NO. 5500A SET

NO.	DESCRIPTION
5528	Socket, 12-point, ⅞ opening
5530	Socket, 12-point, 15/16″ opening
5532	Socket, 12-point, 1″ opening
5534	Socket, 12-point, 1 1/16″ opening
5536	Socket, 12-point, 1⅛″ opening
5538	Socket, 12-point, 1 3/16″ opening
5540	Socket, 12-point, 1¼″ opening
5542	Socket, 12-point, 1 5/16″ opening
5544	Socket, 12-point, 1⅜″ opening
5546	Socket, 12-point, 1 7/16″ opening
5548	Socket, 12-point, 1½″ opening
5550	Socket, 12-point, 1 9/16″ opening
5552	Socket, 12-point, 1⅝″ opening
5554	Socket, 12-point, 1 11/16″ opening
5556	Socket, 12-point, 1¾″ opening
5558	Socket, 12-point, 1 13/16″ opening
5560	Socket, 12-point, 1⅞″ opening
5564	Socket, 12-point, 2″ opening
5568	Socket, 12-point, 2⅛″ opening
5570	Socket, 12-point, 2 3/16″ opening
5572	Socket, 12-point, 2¼″ opening
5576	Socket, 12-point, 2⅜″ opening
5649	Reversible Ratchet, 20″ long
5660	Extension Bar, 5″ long
5661	Extension Bar, 8″ long
5663	Extension Bar, 16″ long
5668	Hinge Handle, 20⅞″ long
5670	Universal Joint
5685	Sliding Bar Handle, 18½″
5696	Steel Box, 23½″ x 9¼″ x 4″

HOW QUALITY IS BUILT INTO PROTO TOOLS

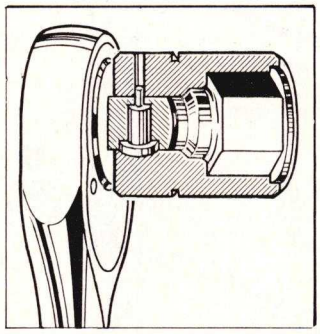
Forging leaves a **steel web** in the box heads of the wrenches. This web is punched out cold in powerful punch presses. This is called **cold slugging.** The slugs are returned to the steel mill for remelting.



See page 98 for Metric sizes.
See page 70 for Power & Impact sizes.

1″ SQUARE DRIVE HEAVY DUTY SOCKET WRENCHES, HANDLES AND ATTACHMENTS

Proto sockets are made from Protoloy® special alloy steel, chrome plated. They are specially heat treated and designed for great strength, for extra tough service. Streamlined to reduce weight. A big feature and safety factor is positive locking of socket to handle or attachment. Each male drive plug has a spring-pellet that snaps into a hole in the socket, acting as a retaining pin. To release, simply push pin provided in each socket.



TYPE C

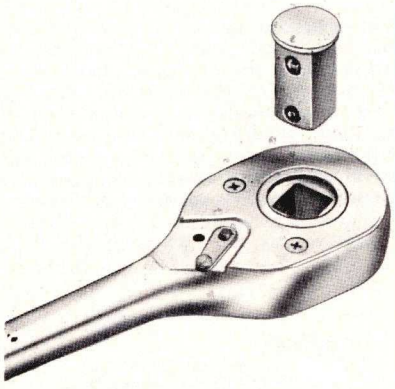
NO. 5752 - 5812 1″ SQUARE DRIVE REGULAR LENGTH SOCKETS DOUBLE HEXAGON / 12-POINT

NO.	NOMINAL OPENING SIZE	INSIDE CLEARANCE	OUTSIDE DIAMETER	TOTAL LENGTH	WT., LBS.
5752	1⅝″	2.25″	2.41″	3¼″	1.7
5758	1 13/16″	2.38″	2.53″	3 11/32″	1.9
5760	1⅞″	2.34″	2.59″	3 11/32″	1.9
5764	2″	2.47″	2.78″	3 15/32″	2.2
5770	2 3/16″	2.78″	3.03″	3¾″	3.1
5772	2¼″	2.81″	3.16″	3 27/32″	3.4
5776	2⅜″	2.94″	3.27″	3 31/32″	3.9
5780	2½″	3.00″	3.53″	4 1/32″	4.9
5782	2 9/16″	3.00″	3.53″	4 1/32″	4.6
5784	2⅝″	3.13″	3.66″	4 5/32″	5.2
5788	2¾″	3.38″	3.84″	4 13/32″	6.2
5794	2 15/16″	3.63″	4.09″	4 21/32″	7.7
5796	3″	3.50″	4.14″	4 21/32″	8.0
5800	3⅛″	3.88″	4.39″	4 29/32″	9.6
5812	3½″	4.19″	4.75″	5⅛″	14.8

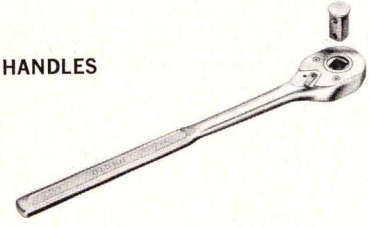
PROTO PROFESSIONAL TOOLS

1″ SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCH ATTACHMENTS AND SETS

Scientifically heat treated to provide great strength and toughness. Extra heavy-duty sockets and attachments have many applications in refineries, shipyards, power plants, railroad repair shops, plants with heavy machinery.



HANDLES



NO. 5848

*Reversible Ratchet with 1″ Square Female Wheel (Handle is marked 5849)
Length, 26″. Wt., Lbs., 11.00.

NO. 5849

*Reversible Ratchet, same as 5848, with 1″ Square Male Adapter Plug 5852
Length, 26″. Wt., Lbs., 12.00.

*Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.

NO. 5852

Male Plug Adapter to convert a 5848 to a 5849
Length, $2^{21}/_{32}$″. Wt., Lbs., .72.

NO. 5868

Hinge Handle
Length, 26″. Wt., Lbs., 7.70.

NO. 5884

Bar, 1″ Stock, for Turning Sockets and for use with Plug 5885 to form Sliding Bar Handle
Length, 24″. Wt., Lbs., 5.30.

NO. 5885

Sliding Plug, with Ball to hold in Tee or Offset Position on 5884 Bar
Length, $2^{27}/_{32}$″. Wt., Lbs., 1.40.

ATTACHMENTS

NO. 5853

Adapter, ¾″ female, 1″ male
Length, $2^{3}/_{8}$″. Wt., Lbs., .70.

NO. 5854

Adapter, 1″ female, ¾″ male
Length, $2^{3}/_{4}$″. Wt., Lbs., 1.34.

NO. 5861

Extension Bar, with 1″ hole in female end for 5884 Bar
Length, 8″. Wt., Lbs., 2.50.

NO. 5863

Extension Bar, with 1″ hole in female end for 5884 Bar
Length, 17″. Wt., Lbs., 4.50.

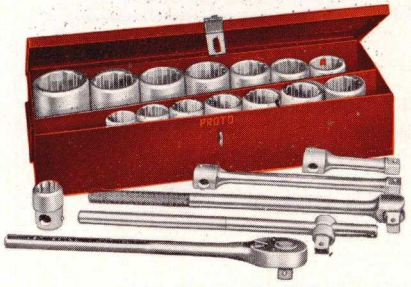
NO. 5700AA EXTRA HEAVY DUTY BASIC SOCKET SET

Ideal for really tough jobs that demand extra sturdy tools. It contains the ten most-used sockets, with openings from 1⅞″ to $2^{15}/_{16}$″, plus a reversible ratchet, a bar handle, a sliding drive plug and two extension bars in a heavy-gauge steel box. Weight, 88 Lbs.

Fedl. Specs.: GGG-W-00641c. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

CONTENTS/NO. 5700AA SET

NO.	DESCRIPTION
5760	Socket, 12-point, 1⅞″ opening
5764	Socket, 12-point, 2″ opening
5770	Socket, 12-point, $2^{3}/_{16}$″ opening
5772	Socket, 12-point, $2^{1}/_{4}$″ opening
5776	Socket, 12-point, $2^{3}/_{8}$″ opening
5780	Socket, 12-point, $2^{1}/_{2}$″ opening
5782	Socket, 12-point, $2^{9}/_{16}$″ opening
5784	Socket, 12-point, $2^{5}/_{8}$″ opening
5788	Socket, 12-point, $2^{3}/_{4}$″ opening
5794	Socket, 12-point, $2^{15}/_{16}$″ opening
5849	Reversible Ratchet, 26″ long
5861	Extension Bar, 8″ long
5863	Extension Bar, 17″ long
5884	Bar Handle, 24″ long
5885	Drive Plug for 5884 Bar
5894	Steel Box, 30″ x $8^{1}/_{4}$″ x 5″



NO. 5700B EXTRA HEAVY DUTY SOCKET SET

Contains full line of 1″ drive sockets and attachments for installation and repair of heavy equipment. It includes fifteen sockets with openings from 1⅝″ to 3½″, a reversible ratchet, a hinge handle, a bar handle, a sliding drive plug and two extension bars in a heavy-gauge steel box. Weight, 155 lbs.

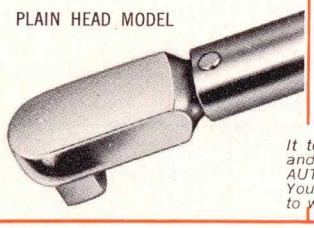
NO.	DESCRIPTION
5752	Socket, 12-point, 1⅝″ opening
5758	Socket, 12-point, $1^{13}/_{16}$″ opening
5760	Socket, 12-point, 1⅞″ opening
5764	Socket, 12-point, 2″ opening
5770	Socket, 12-point, $2^{3}/_{16}$″ opening
5772	Socket, 12-point, $2^{1}/_{4}$″ opening
5776	Socket, 12-point, $2^{3}/_{8}$″ opening
5780	Socket, 12-point, $2^{1}/_{2}$″ opening
5782	Socket, 12-point, $2^{9}/_{16}$″ opening
5784	Socket, 12-point, $2^{5}/_{8}$″ opening
5788	Socket, 12-point, $2^{3}/_{4}$″ opening
5794	Socket, 12-point, $2^{15}/_{16}$″ opening
5796	Socket, 12-point, 3″ opening
5800	Socket, 12-point, $3^{1}/_{8}$″ opening
5812	Socket, 12-point, 3½″ opening
5849	Reversible Ratchet, 26″ long
5861	Extension Bar, 8″ long
5863	Extension Bar, 17″ long
5868	Hinge Handle, 26″ long
5884	Bar Handle, 24″ long
5885	Drive Plug for 5884 Bar
5895	Steel Box, 31″ x 12″ x $5^{3}/_{4}$″

TORQUE INDICATING WRENCHES

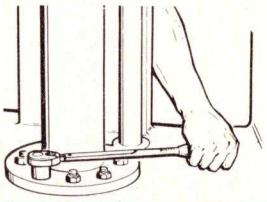
TORQUE INDICATING WRENCHES

The Proto torquer is faster, more efficient and much easier to use than others because it uses positive torque indicating action (instead of devices that merely indicate what the torque should be). You can set the Proto wrench at the torque you want. It releases automatically when that torque point is reached. No guessing. No staring at hard-to-read dials, no listening for hard-to-hear signals, no over-torquing, no under-torquing, no clumsy gadgets sticking out in your way. A great time saver.

PLAIN HEAD MODEL



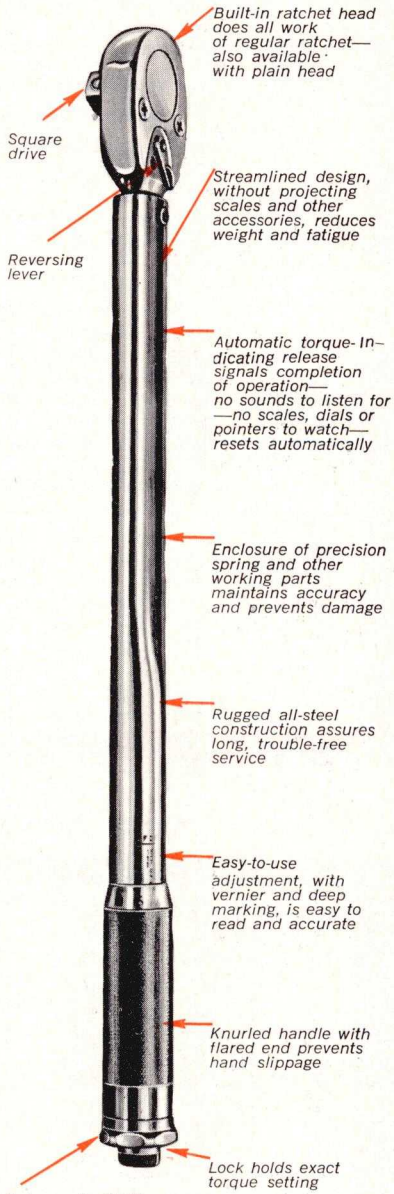
It torques and releases AUTOMATICALLY. You don't have to watch or listen.



You can use it in the dark, in blind spots, noisy places, on vibrating machinery, or with heavy gloves on your hands. Turn the handle until its micrometer-type callibrations show torque you want. Attach socket or apply to nut or bolt. You pull right up to the required torque point without hesitation, eyestrain, earstrain or nervous tension. When the right torque is reached, the Proto wrench releases automatically and signals you with its own mechanical action . . . tells you "when" clearly and unmistakably. After removal of handle pressure the wrench resets automatically to the same torque point. You can work a lot longer without getting tired because the Proto torquer has no heavy accessories, no protruding devices interfering with operation. You don't have to struggle into position to read a dial or listen for a click. Tighten, loosen and torque, all with one tool. Ratchet models do the work of both a reversible ratchet wrench and a torque wrench. Saves a lot of time switching tools and sockets. The Proto torquer gives you a longer lifetime of accurate, trouble-free operation because all working parts are enclosed, there are no protruding pointers or glass-faced dials to damage. All-steel construction is rugged, requires no special care. The Proto torquer is one of the most versatile and useful tools in the manufacture and repair of instruments, aircraft parts, missiles, electronic equipment and automatic transmissions. Also excellent for heavy-duty work on diesel engines, cars, trucks, aircraft, power and construction equipment.

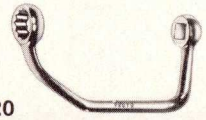
NO.	CAPACITY	GRADUATIONS	SQUARE DRIVE SIZE	STYLE OF HEAD	OVERALL LENGTH	WT., LBS.
FOOT/POUND WRENCHES						
6006	0-80	½ ft/lb	⅜"	Ratchet	14"	1.46
6008	0-80	½ ft/lb	½"	Ratchet	14"	1.48
6015	10-150	1 ft/lb	½"	Plain	17½"	2.34
6016	10-150	1 ft/lb	½"	Ratchet	18"	2.52
6017	100-500	1 ft/lb	¾"	Plain	41"	8.78
6018	50-300	1 ft/lb	¾"	Ratchet	33⅛"	7.56
6020	100-500	1 ft/lb	¾"	Ratchet	41"	13.15
INCH/POUND WRENCHES						
6061	0-150	1 in/lb	¼"	Plain	9¼"	.95
6062	0-150	1 in/lbs	¼"	Ratchet	10½"	1.04
6063	0-150	1 in/lbs	⅜"	Plain	9¼"	1.04
6064	0-150	1 in/lbs	⅜"	Ratchet	10½"	1.04
6065	100-800	5 in/lbs	⅜"	Plain	13½"	1.38
6066	100-800	5 in/lbs	⅜"	Ratchet	13⅞"	1.46
6069	700-1600	10 in/lbs	½"	Plain	17"	2.42
6070	700-1600	10 in/lbs	½"	Ratchet	17⅜"	2.52
6071	1200-6000	10 in/lbs	¾"	Plain	41"	8.78
METER/KILOGRAM WRENCHES						
6006M	1-10-M/Kg	0.1-M/Kg	9.53 mm	Ratchet	35.4 cm	1.50
6016M	2-20-M/Kg	0.2-M/Kg	12.29 mm	Ratchet	45 cm	2.52
6018M	5-35-M/Kg	0.1-M/Kg	19.05 mm	Ratchet	82 cm	7.56

RATCHET HEAD MODEL



TORQUE WRENCH ADAPTERS

To clear obstructions in torquing head bolts. Many other uses. All are ½" drive.



NO. 6420

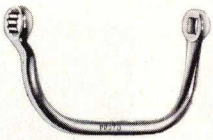
¾", 12-point box opening, wide sweep
Length, 6 19/32". Wt., Lbs., .61.

6420—For Chev., Ford and other engines with ¾" head bolts.

NO. 6425

¾", 12-point box opening, close sweep
Length, 5 17/32". Wt., Lbs., .43.

6425—For use on engines having ¾" head bolts with limited clearance.



NO. 6435

1 1/16", 12-point box opening
Length, 7 5/16". Wt., Lbs., .63.

6435—For Ford products, Pontiac, Studebaker and other engines with 1 1/16" head bolts.

STANDARD NUT, BOLT AND SCREW SIZING CHART

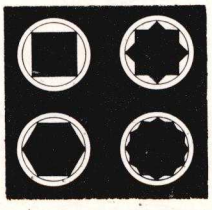
NOMINAL OPENING SIZES OF PROTO WRENCHES OR SOCKETS IN INCHES TO FIT STANDARD BOLT HEADS, NUTS AND SCREW HEADS

Locate thread diameter of bolt, nut or screw in extreme left or right column. Then move across to box which has proper identification of bolt, nut or screw at top of vertical column. The size in this particular box is the nominal opening size in inches of the PROTO wrenches and sockets that will fit.

American Standards Association—ASA B18.2, Appendix I

NUTS					BOLTS AND SCREWS				
THREAD DIAMETER OF NUT	FINISHED SERIES AND FINISHED THICK NUTS	REGULAR SERIES HEX AND SQUARE NUTS	HEAVY SERIES HEX AND SQUARE NUTS	MACHINE SCREW NUTS AND STOVE BOLT NUTS	REGULAR AND FINISHED SERIES HEX AND SQUARE HEAD BOLTS	HEAVY SERIES HEX AND SQUARE HEAD BOLTS	LAG SCREWS	SQUARE HEAD SET SCREWS	THREAD DIAMETER OF BOLT OR SCREW
Use wrench or socket size shown below					Use wrench or socket size shown below				
#0 & 1				5/32					#0 & 1
#2 & 3				3/16					#2 & 3
#4				1/4					#4
#5 & 6				5/16					#5 & 6
#8				11/32					#8
#10				3/8			5/16	3/16	#10
#12				7/16				7/32	#12
1/4"	7/16	7/16	1/2	7/16	†3/8 - 7/16		3/8	1/4	1/4"
5/16"	1/2	9/16	9/16	9/16	1/2		1/2	5/16	5/16"
3/8"	9/16	5/8	11/16	5/8	9/16		9/16	3/8	3/8"
7/16"	11/16	3/4	3/4		5/8		5/8	7/16	7/16"
1/2"	3/4	13/16	7/8		3/4	7/8	3/4	1/2	1/2"
9/16"	7/8	7/8	15/16		13/16			9/16	9/16"
5/8"	15/16	1	1 1/16		15/16	1 1/16	15/16	5/8	5/8"
3/4"	1 1/8	1 1/8	1 1/4		1 1/8	1 1/4	1 1/8	3/4	3/4"
7/8"	1 5/16	1 5/16	1 7/16		1 5/16	1 7/16	1 5/16	7/8	7/8"
1"	1 1/2	1 1/2	1 5/8		1 1/2	1 5/8	1 1/2	1	1"
1 1/8"	1 11/16	1 11/16	1 13/16		1 11/16	1 13/16	1 11/16	1 1/8	1 1/8"
1 1/4"	1 7/8	1 7/8	2		1 7/8	2	1 7/8	1 1/4	1 1/4"
1 3/8"	2 1/16	2 1/16	2 3/16		2 1/16	2 3/16		1 3/8	1 3/8"
1 1/2"	2 1/4	2 1/4	2 3/8		2 1/4	2 3/8		1 1/2	1 1/2"
1 5/8"	2 7/16	2 7/16	2 9/16		2 7/16	2 9/16			1 5/8"
1 3/4"	2 5/8	2 5/8	2 3/4		2 5/8	2 3/4			1 3/4"
1 7/8"	2 13/16	2 13/16	2 15/16		2 13/16	2 15/16			1 7/8"
2"	3	3	3 1/8		3	3 1/8			2"
2 1/4"	3 3/8	3 3/8	3 1/2		3 3/8	3 1/2			2 1/4"
2 1/2"	3 3/4	3 3/4	3 7/8		3 3/4	3 7/8			2 1/2"
2 3/4"	4 1/8	4 1/8	4 1/4		4 1/8	4 1/4			2 3/4"
3"	4 1/2	4 1/2	4 5/8		4 1/2	4 5/8			3"
3 1/4"			5		4 7/8				3 1/4"
3 1/2"			5 3/8		5 1/4				3 1/2"
3 3/4"			5 3/4		5 5/8				3 3/4"
4"			6 1/8		6				4"

†*Regular Square Bolts Only.*



4- and 8-Point Sockets Are Used on Square Bolt Heads, Nuts and Screw Heads.

6- and 12-Point Sockets Are Used on Hexagon Bolt Heads, Nuts and Screw Heads.

DECIMAL EQUIVALENTS *inches into decimals*

FRACTIONS	DECIMALS
1/64	.0156
1/32	.0312
3/64	.0468
1/16	.0625
5/64	.0781
3/32	.0937
7/64	.1093
1/8	.1250
9/64	.1406
5/32	.1562
11/64	.1718
3/16	.1875
13/64	.2031
7/32	.2187
15/64	.2343
1/4	.2500
17/64	.2656
9/32	.2812
19/64	.2968
5/16	.3125
21/64	.3281
11/32	.3437
23/64	.3593
3/8	.3750
25/64	.3906
13/32	.4062
27/64	.4218
7/16	.4375
29/64	.4531
15/32	.4687
31/64	.4843
1/2	.5000

FRACTIONS	DECIMALS
33/64	.5156
17/32	.5312
35/64	.5468
9/16	.5625
37/64	.5781
19/32	.5937
39/64	.6093
5/8	.6250
41/64	.6406
21/32	.6562
43/64	.6718
11/16	.6875
45/64	.7031
23/32	.7187
47/64	.7343
3/4	.7500
49/64	.7656
25/32	.7812
51/64	.7968
13/16	.8125
53/64	.8281
27/32	.8437
55/64	.8593
7/8	.8750
57/64	.8906
29/32	.9062
59/64	.9218
15/16	.9375
61/64	.9531
31/32	.9687
63/64	.9843
1	1.0000

METRIC EQUIVALENTS *millimeters into inches, decimals*

MILLIMETERS	DECIMALS
1	0.0394
2	0.0787
3	0.1181
4	0.1575
5	0.1968
6	0.2362
7	0.2756
8	0.3150
9	0.3543
10	0.3937
11	0.4331
12	0.4724
13	0.5118
14	0.5512
15	0.5905
16	0.6299
17	0.6693
18	0.7087
19	0.7480
20	0.7874
21	0.8268
22	0.8661
23	0.9055
24	0.9449
25	0.9842
26	1.0236
27	1.0630
28	1.1024
29	1.1417
30	1.1811
31	1.2205
32	1.2598
33	1.2992

MILLIMETERS	DECIMALS
34	1.3386
35	1.3779
36	1.4173
37	1.4567
38	1.4961
39	1.5354
40	1.5748
41	1.6142
42	1.6535
43	1.6929
44	1.7323
45	1.7716
46	1.8110
47	1.8504
48	1.8898
49	1.9291
50	1.9685
51	2.0079
52	2.0472
53	2.0866
54	2.1260
55	2.1653
56	2.2047
57	2.2441
58	2.2835
59	2.3228
60	2.3622
61	2.4016
62	2.4409
63	2.4803
64	2.5197
65	2.5590
66	2.5984

MILLIMETERS	DECIMALS
67	2.6378
68	2.6772
69	2.7165
70	2.7559
71	2.7953
72	2.8346
73	2.8740
74	2.9134
75	2.9527
76	2.9921
77	3.0315
78	3.0709
79	3.1102
80	3.1496
81	3.1890
82	3.2283
83	3.2677
84	3.3071
85	3.3464
86	3.3858
87	3.4252
88	3.4646
89	3.5039
90	3.5433
91	3.5827
92	3.6220
93	3.6614
94	3.7008
95	3.7401
96	3.7795
97	3.8189
98	3.8583
99	3.8976
100	3.9370

PROTO PROFESSIONAL TOOLS

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

POWER AND IMPACT-TYPE SOCKET WRENCHES AND ATTACHMENTS

Engineered for extra rugged service on all types of power nut-running and impact nut-setting wrenches, and for heavy-duty use on manual attachments.

Protoloy® alloy steels, scientific heat treatment and advanced design provide these sockets with great strength, toughness, snug fit, freedom from slipping, and maximum clearance for speed and ease in handling. All of these features insure a high safety factor, long life and low cost.

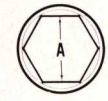
They fit most clutch-type power nut runners and electric or pneumatic impact nut setters. They also fit manual socket handles and therefore are ideal for many jobs demanding strength greater than provided in regular thinner-wall sockets.

Proto power and impact sockets are widely used by all types of manufacturers for assembly and maintenance work, and are noted for their outstanding performance on production lines. Finish is black oxide and lacquered.

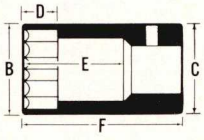
All socket drive end walls are drilled for use on attachments with pellet-type locking device. All Proto power attachments employ the pellet type . . . a positive locking device for greater safety.

Brite-Size® marking provides easy identification.

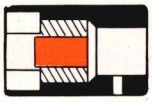
1/4" SQUARE DRIVE POWER SOCKETS



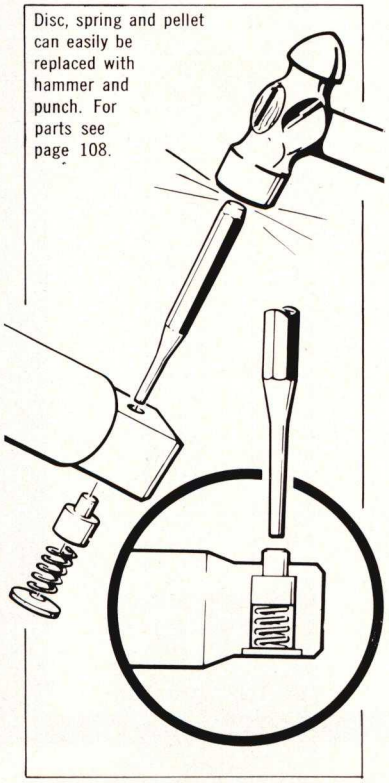
6 PT.



PKM socket, with shallow punching and magnet (red area) for holding self-tapping screws



See page 90 for Metric sizes.
See page 49 for Standard sizes.



HOW TO REPLACE EXTENSION BAR HOLDER

REGULAR LENGTH SOCKETS—HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
6906H	B	3/16"	.36"	.44"	.19"	9/16"	7/8"	.02
6908H	A	1/4"	.44"	.44"	.19"	9/16"	7/8"	.02
6909H	A	9/32"	.50"	.50"	.22"	9/16"	7/8"	.03
6910H	A	5/16"	.50"	.50"	.22"	9/16"	7/8"	.03
6911H	A	11/32"	.53"	.53"	.25"	9/16"	7/8"	.04
6912H	A	3/8"	.56"	.56"	.25"	9/16"	7/8"	.04
6914H	A	7/16"	.63"	.63"	.31"	9/16"	7/8"	.05
6916H	A	1/2"	.69"	.69"	.34"	9/16"	7/8"	.06

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON / 6-POINT

6906PK	B	3/16"	.36"	.44"	.13"	1/2"	7/8"	.02
6908PK	A	1/4"	.44"	.44"	.13"	1/2"	29/32"	.02
6909PK	A	9/32"	.50"	.50"	.13"	1/2"	29/32"	.03
6910PK	A	5/16"	.50"	.50"	.13"	1/2"	29/32"	.03
6912PK	A	3/8"	.56"	.56"	.16"	1/2"	29/32"	.04
6914PK	A	7/16"	.63"	.63"	.25"	1/2"	1"	.05
6916PK	A	1/2"	.69"	.69"	.28"	9/16"	1"	.06

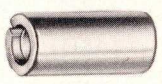
REGULAR LENGTH MAGNETIC SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON / 6-POINT

6906PKM	B	3/16"	.36"	.44"	.06"	0	29/32"	.03
6908PKM	A	1/4"	.44"	.44"	.08"	0	15/16"	.03
6909PKM	A	9/32"	.50"	.50"	.09"	0	15/16"	.03
6910PKM	A	5/16"	.50"	.50"	.11"	0	15/16"	.03
6911PKM	A	11/32"	.53"	.53"	.13"	0	15/16"	.04
6912PKM	A	3/8"	.56"	.56"	.14"	0	15/16"	.05
6914PKM	A	7/16"	.63"	.63"	.14"	0	1"	.07
6916PKM	A	1/2"	.69"	.69"	.16"	0	1"	.08

HEX DRIVER-EXTENSION

1/4" square by 1/4" hexagon drive.

TOOL NO.	MAJOR DIA.	LENGTH	WT. LBS.
7102	3/8"	2"	.03
7103	3/8"	4"	.12
7104	3/8"	6"	.20



BIT HOLDER ATTACHMENT

NO.	DESCRIPTION	LENGTH	WT., LBS.
6925	1/4" square drive for 1/4" hex bits	1"	.02

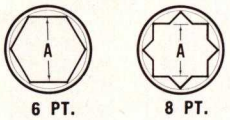
3/8" SQUARE DRIVE POWER SOCKETS

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

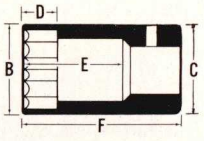
See page 51 for Standard sizes.
See page 91 for Metric sizes.

3/8" SQUARE DRIVE POWER SOCKETS

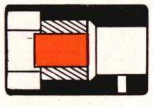
DIMENSION CODE

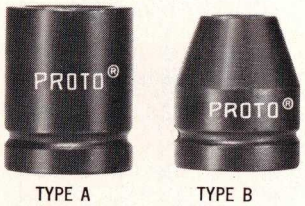


6 PT. 8 PT.



PKM socket, with shallow punching and magnet (red area) for holding self-tapping screws.





TYPE A TYPE B

REGULAR LENGTH SOCKETS

TYPE A TYPE B

DEEP LENGTH SOCKETS

PKM

3/8" SQUARE DRIVE REGULAR LENGTH POWER SOCKETS—HEXAGON/6-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7210H	B	5/16"	.52"	.69"	.22"	1/2"	15/16"	.07
7211H	B	11/32"	.55"	.69"	.28"	1/2"	15/16"	.07
7212H	B	3/8"	.59"	.69"	.28"	1/2"	15/16"	.06
7214H	A	7/16"	.69"	.69"	.28"	1/2"	15/16"	.05
7216H	A	1/2"	.75"	.75"	.47"	1/2"	15/16"	.06
7218H	A	9/16"	.78"	.78"	.28"	1/2"	15/16"	.07
7220H	A	5/8"	.88"	.88"	.28"	1/2"	15/16"	.10
7222H	A	11/16"	.94"	.94"	.42"	9/16"	1"	.16
7224H	A	3/4"	1.03"	1.03"	.42"	9/16"	1"	.21

DEEP LENGTH SOCKETS—HEXAGON/6-POINT

7010H	B	5/16"	.52"	.69"	.31"	1"	1 1/2"	.10
7012H	B	3/8"	.59"	.69"	.31"	1"	1 1/2"	.11
7014H	A	7/16"	.69"	.69"	.36"	1"	1 1/2"	.11
7016H	A	1/2"	.75"	.75"	.41"	1"	1 1/2"	.11
7018H	A	9/16"	.78"	.78"	.45"	1"	1 1/2"	.12
7020H	A	5/8"	.88"	.88"	.50"	1"	1 1/2"	.14
7022H	A	11/16"	.94"	.94"	.55"	1"	1 1/2"	.20
7024H	A	3/4"	1.03"	1.03"	.59"	1"	1 1/2"	.24

REGULAR LENGTH SOCKETS—HEXAGON/6-POINT SURFACE DRIVE

7214HS	A	7/16"	.69"	.69"	.28"	1/2"	15/16"	.05
7216HS	A	1/2"	.75"	.75"	.28"	1/2"	15/16"	.06
7218HS	A	9/16"	.78"	.78"	.28"	1/2"	15/16"	.06

DEEP LENGTH SOCKETS—HEXAGON/6-POINT SURFACE DRIVE

7014HS	A	7/16"	.69"	.69"	.28"	1 1/16"	1 1/2"	.09
7016HS	A	1/2"	.75"	.75"	.31"	1 1/16"	1 1/2"	.10
7018HS	A	9/16"	.78"	.78"	.34"	1 1/16"	1 1/2"	.11

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON/6-POINT

7208PK	B	1/4"	.47"	.69"	.11"	9/16"	1 1/16"	.07
7210PK	B	5/16"	.52"	.69"	.19"	9/16"	1 1/16"	.07
7212PK	B	3/8"	.58"	.69"	.22"	5/8"	1 1/16"	.06
7214PK	A	7/16"	.69"	.69"	.25"	5/8"	1 1/16"	.06
7216PK	A	1/2"	.75"	.75"	.28"	11/16"	1 1/8"	.06

REGULAR LENGTH MAGNETIC SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON/6-POINT

7210PKM	B	5/16"	.52"	.69"	.11"	0	1 1/16"	.07
7212PKM	B	3/8"	.59"	.69"	.14"	0	1 1/16"	.07
7214PKM	A	7/16"	.69"	.69"	.14"	0	1 1/16"	.06
7216PKM	A	1/2"	.75"	.75"	.16"	0	1 1/8"	.07
7218PKM	A	9/16"	.78"	.78"	.16"	0	1 1/8"	.08

REGULAR LENGTH SOCKETS—DOUBLE SQUARE/8-POINT

7208S	B	1/4"	.48"	.69"	.16"	9/16"	1"	.05
7210S	B	5/16"	.63"	.69"	.22"	9/16"	1"	.06
7212S	A	3/8"	.69"	.69"	.25"	9/16"	1"	.06
7214S	A	7/16"	.81"	.81"	.25"	9/16"	1"	.09
7216S	A	1/2"	.91"	.91"	.31"	5/8"	1 1/16"	.11
7218S	A	9/16"	1.00"	1.00"	.38"	11/16"	1 1/8"	.15
7220S	A	5/8"	1.19"	1.19"	.41"	13/16"	1 1/4"	.27
7222S	A	11/16"	1.19"	1.19"	.44"	13/16"	1 1/4"	.25

BALL-TYPE UNIVERSAL SOCKETS—HEXAGON/6-POINT

7273	B	3/8"	.59"	.97"	.31"	1/2"	2 3/16"	.24
7274	B	7/16"	.69"	.97"	.34"	1/2"	2 7/32"	.25
7275	B	1/2"	.75"	.97"	.38"	9/16"	2 1/4"	.25
7276	B	9/16"	.84"	.97"	.42"	9/16"	2 9/32"	.26
7277	B	5/8"	.88"	.97"	.44"	9/16"	2 11/32"	.26

See page 112 for spare parts listing.

3/8" / 1/2" SQUARE DRIVE POWER SOCKETS / ATTACHMENTS

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

BIT HOLDER ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT., LBS.
6930	3/8" square drive for 5/16" hex bits	1 1/4"	.10
6931	3/8" square drive for 1/4" hex bits	1 1/4"	.08

NO. 7270 UNIVERSAL JOINT

TOOL NO.	SQ. DRIVE SIZE	MAJOR DIA.	LENGTH	WT. LBS.
7270	3/8"	15/16"	2 3/8"	.28

EXTENSION BARS

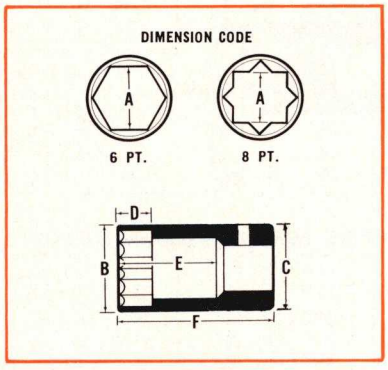
TOOL NO.	SQ. DRIVE SIZE	SHANK DIA.	LENGTH	WT. LBS.
7175-P	3/8"	7/16"	3"	.16
7176-P	3/8"	7/16"	6"	.28

HEX DRIVER EXTENSION

3/8" square by 7/16" hexagon drive

TOOL NO.	DRIVE SIZE		MAJOR DIA.	LENGTH	WT. LBS.
	SQUARE	HEXAGON			
7105	3/8"	1/4"	9/16"	2"	.08
7106	3/8"	1/4"	9/16"	4"	.17
7107	3/8"	1/4"	9/16"	6"	.30
7111	3/8"	7/16"	9/16"	2 3/4"	.14
7113	3/8"	7/16"	9/16"	5"	.30
7114	3/8"	7/16"	9/16"	8"	.45
7115	3/8"	7/16"	9/16"	12"	.75

1/2" SQUARE DRIVE POWER SOCKETS AND ATTACHMENTS



TYPE A TYPE B

REGULAR LENGTH SOCKETS

TYPE A TYPE B

DEEP LENGTH SOCKETS

REGULAR LENGTH SOCKETS—HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7412H	B	3/8"	.64"	.88"	.28"	7/8"	1 1/2"	.13
*7414H	B	7/16"	.72"	.88"	.33"	7/8"	1 1/2"	.16
*7416H	B	1/2"	.80"	.94"	.38"	7/8"	1 1/2"	.17
*7418H	B	9/16"	.88"	.94"	.42"	7/8"	1 1/2"	.17
7420H	A	5/8"	1.00"	1.00"	.47"	7/8"	1 1/2"	.17
7422H	A	11/16"	1.03"	1.03"	.52"	7/8"	1 1/2"	.22
7424H	A	3/4"	1.13"	1.13"	.56"	7/8"	1 1/2"	.26
7426H	A	13/16"	1.19"	1.19"	.63"	7/8"	1 1/2"	.38
7428H	A	7/8"	1.28"	1.28"	.63"	7/8"	1 1/2"	.31
7430H	A	15/16"	1.38"	1.38"	.69"	1 1/8"	1 3/4"	.45
7432H	A	1"	1.44"	1.44"	.75"	1 1/8"	1 3/4"	.48
7434H	A	1 1/16"	1.50"	1.50"	.81"	1 1/4"	2"	.55
7436H	A	1 1/8"	1.63"	1.63"	.84"	1 1/4"	2"	.66
7438H	A	1 3/16"	1.69"	1.69"	.88"	1 1/4"	2"	.71
7440H	A	1 1/4"	1.75"	1.75"	.94"	1 1/4"	2"	.79

DEEP LENGTH SOCKETS—HEXAGON / 6-POINT

7312H	B	3/8"	.64"	.88"	.28"	2 5/8"	3 1/4"	.33
7314H	B	7/16"	.72"	.88"	.33"	2 5/8"	3 1/4"	.33
7316H	B	1/2"	.80"	.94"	.38"	2 5/8"	3 1/4"	.31
7318H	B	9/16"	.88"	.94"	.44"	2 5/8"	3 1/4"	.37
7320H	A	5/8"	1.00"	1.00"	.47"	2 5/8"	3 1/4"	.36
7322H	A	11/16"	1.03"	1.03"	.52"	2 5/16"	3 1/4"	.41
7324H	A	3/4"	1.13"	1.13"	.56"	2 5/16"	3 1/4"	.59
7326H	A	13/16"	1.19"	1.19"	.61"	2 5/16"	3 1/4"	.56
7328H	A	7/8"	1.28"	1.28"	.67"	2 3/4"	3 1/2"	.62
7330H	A	15/16"	1.38"	1.38"	.70"	2 3/4"	3 1/2"	.86
7332H	A	1"	1.44"	1.44"	.75"	2 11/16"	3 1/2"	.90
7334H	A	1 1/16"	1.50"	1.50"	.78"	2 11/16"	3 1/2"	1.00
7336H	A	1 1/8"	1.56"	1.56"	.84"	2 11/16"	3 1/2"	1.02

REGULAR LENGTH SOCKETS—HEXAGON / 6-POINT SURFACE DRIVE

7414HS	B	7/16"	.72"	.88"	.28"	7/8"	1 1/2"	.14
7416HS	B	1/2"	.80"	.94"	.31"	7/8"	1 1/2"	.16
7418HS	B	9/16"	.88"	.94"	.34"	7/8"	1 1/2"	.17
7420HS	A	5/8"	1.00"	1.00"	.41"	7/8"	1 1/2"	.19
7422HS	A	11/16"	1.03"	1.03"	.44"	7/8"	1 1/2"	.20
7424HS	A	3/4"	1.13"	1.13"	.47"	7/8"	1 1/2"	.24
7426HS	A	13/16"	1.19"	1.19"	.50"	7/8"	1 1/2"	.28
7428HS	A	7/8"	1.28"	1.28"	.56"	7/8"	1 1/2"	.32

DEEP LENGTH SOCKETS—HEXAGON / 6-POINT SURFACE DRIVE

7316HS	B	1/2"	.80"	.94"	.31"	2 5/8"	3 1/4"	.40
7318HS	B	9/16"	.88"	.94"	.34"	2 5/8"	3 1/4"	.43
7320HS	A	5/8"	1.00"	1.00"	.41"	2 5/8"	3 1/4"	.44
7322HS	A	11/16"	1.03"	1.03"	.44"	2 5/16"	3 1/4"	.44
7324HS	A	3/4"	1.13"	1.13"	.47"	2 5/16"	3 1/4"	.54
7326HS	A	13/16"	1.19"	1.19"	.50"	2 5/16"	3 1/4"	.58

*Does not have Dyna-Ring

½" SQUARE DRIVE POWER SOCKETS ATTACHMENTS / SETS

PK TYPE A

PK TYPE B

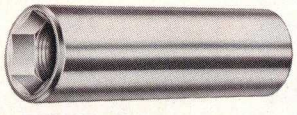
7412PKM — 7418PKM

NO. 7470 UNIVERSAL JOINT

TOOL NO.	SQ. DRIVE SIZE	MAJOR DIA.	LENGTH	WT. LBS.
7470	½"	1⅛"	2¾"	.38

NO. 6935 BIT HOLDER ATTACHMENT

DESCRIPTION	LENGTH	WT., LBS.
½" square drive for 5/16" hex bits	1½"	.13



NO. 7336CP COTTON PICKER SOCKET

Cotton Picker Socket, 1⅛" hexagon opening; ½" square drive, 5¾" long. For removing and replacing cotton picker spindles.

NO. 7480 13/16" UNIVERSAL SOCKET

Used in combination with special holding clamps Nos. 6574 and 6575 for Olds and in all regular universal power socket applications.

Proto power and impact sockets are made with Protoloy® alloy steels and are scientifically heat-treated and feature advance design.

Shipping weight .37 lb. bulk package.

HEX DRIVER EXTENSION

TOOL NO.	DRIVE SIZE SQUARE	DRIVE SIZE HEXAGON	SHANK DIA.	LENGTH	WT. LBS.
7121	½"	7/16"	21/32"	2¾"	.17
7123	½"	7/16"	21/32"	5"	.38
7124	½"	7/16"	21/32"	8"	.70
7125	½"	7/16"	21/32"	12"	1.05
7126	½"	7/16"	21/32"	18"	1.70

REGULAR LENGTH SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7412PK	B	3/8"	.64"	.88"	.22"	7/8"	1½"	.14
7414PK	B	7/16"	.72"	.88"	.25"	7/8"	1½"	.15
7416PK	B	½"	.80"	.94"	.25"	7/8"	1½"	.17
7418PK	B	9/16"	.88"	.94"	.34"	7/8"	1½"	.19

REGULAR LENGTH MAGNETIC SOCKETS FOR SELF-TAPPING SCREWS—HEXAGON / 6-POINT

7412PKM	B	3/8"	.64"	.88"	.14"	0	1½"	.15
7414PKM	B	7/16"	.72"	.88"	.14"	0	1½"	.16
7416PKM	B	½"	.80"	.94"	.16"	0	1½"	.18
7418PKM	B	9/16"	.88"	.94"	.16"	0	1½"	.20

REGULAR LENGTH SOCKETS—DOUBLE SQUARE / 8-POINT

7412S	B	3/8"	.75"	.88"	.28"	7/8"	1½"	.16
7414S	B	7/16"	.84"	.94"	.33"	7/8"	1½"	.17
7416S	A	½"	.94"	.94"	.38"	7/8"	1½"	.21
7418S	A	9/16"	1.00"	1.00"	.42"	7/8"	1½"	.26
7420S	A	5/8"	1.13"	1.13"	.47"	7/8"	1½"	.29
7422S	A	11/16"	1.19"	1.19"	.52"	7/8"	1½"	.37
7424S	A	¾"	1.31"	1.31"	.53"	7/8"	1½"	.44
7426S	A	13/16"	1.38"	1.38"	.61"	7/8"	1½"	.39
7428S	A	7/8"	1.50"	1.50"	.66"	7/8"	1½"	.45
7430S	A	15/16"	1.63"	1.63"	.70"	1⅛"	1¾"	.58
7432S	A	1"	1.69"	1.69"	.75"	1⅛"	1¾"	.60
7434S	A	1 1/16"	1.84"	1.84"	.75"	1⅜"	2"	1.02

DEEP LENGTH SOCKETS—DOUBLE SQUARE / 8-POINT

7312S	B	3/8"	.75"	.88"	.28"	2⅝"	3¼"	.38
7314S	B	7/16"	.84"	.94"	.31"	2⅝"	3¼"	.41
7316S	A	½"	.94"	.94"	.38"	2⅝"	3¼"	.40
7318S	A	9/16"	1.00"	1.00"	.44"	2⅝"	3¼"	.44
7320S	A	5/8"	1.13"	1.13"	.44"	2⅝"	3¼"	.57
7322S	A	11/16"	1.19"	1.19"	.47"	2 1/16"	3¼"	.62
7324S	A	¾"	1.31"	1.31"	.50"	2 1/16"	3¼"	.75
7326S	A	13/16"	1.38"	1.38"	.56"	2 1/16"	3¼"	.82
7328S	A	7/8"	1.50"	1.50"	.63"	2¾"	3½"	1.09
7330S	A	15/16"	1.63"	1.63"	.69"	2¾"	3½"	1.33
7332S	A	1"	1.69"	1.69"	.75"	2¾"	3½"	1.43

*BALL-TYPE UNIVERSAL SOCKETS—HEXAGON / 6-POINT

7474	B	7/16"	.69"	1.13"	.34"	3/8"	2 17/32"	.35
7475	B	½"	.78"	1.13"	.38"	3/8"	2 17/32"	.36
7476	B	9/16"	.86"	1.13"	.42"	9/16"	2 9/16"	.37
7477	B	5/8"	.94"	1.13"	.44"	5/8"	2 19/32"	.37
7478	B	11/16"	1.02"	1.13"	.48"	5/8"	2⅝"	.37
7479	B	¾"	1.03"	1.13"	.50"	11/16"	2 41/64"	.36
7480	A	¾"	1.13"	1.13"	.50"	11/16"	2 41/64"	.37

POWER ADAPTER

NO.	TYPE	FEMALE	MALE	MAJOR DIA.	LENGTH	WT., LBS.
7652	B	½" SQ.	¾" SQ.	1⅛"	1 29/32"	.28
7654	B	½" SQ.	5/8" SQ.	1 1/16"	1¾"	.28

EXTENSION BARS

½" female by ½" male

TOOL NO.	SQ. DRIVE SIZE	MAJOR DIA.	LENGTH	WT. LBS.
7180-P	½"	1"	2"	.23
7181-P	½"	19/32"	5"	.47
7182-P	½"	19/32"	2 11/16"	.30
7183-P	½"	19/32"	7"	.65
7184-P	½"	19/32"	9"	.80
7183-00	½"	19/32"	10"	.90

*See page 112 for spare parts listing.

NO. 7400D SET

½" square drive power sockets

Six ½" square drive power sockets that do 90% of automotive impact work are contained in a durable handle-lock tray.

NO.	SIZE
7416H	½"
7418H	9/16"
7420H	5/8"
7422H	11/16"
7424H	¾"
7426H	13/16"
9974	Tray

Weight 1.66 lbs.

5/8" SQUARE DRIVE POWER SOCKETS / ATTACHMENTS

PROTO® PROFESSIONAL TOOLS

See page 97 for Metric sizes. See page 51 for Standard sizes.

5/8"

REGULAR LENGTH SOCKETS

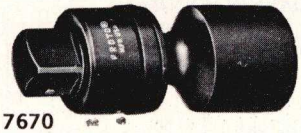
TYPE A

TYPE B

DEEP LENGTH SOCKETS

TYPE A

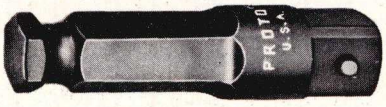
TYPE B



NO. 7670 UNIVERSAL JOINT —BALL TYPE

TOOL NO.	SQ. DRIVE SIZE	MAJOR DIA.	LENGTH	WT. LBS.
7670	5/8"	1¼"	3"	.60

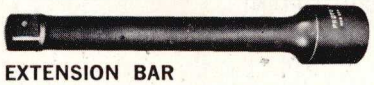
Parts for the 7670 Universal Joint are easily replaced. No special tools required.



HEX DRIVER EXTENSION

5/8" square by 5/8" hex. drive

TOOL NO.	DRIVE SIZE SQUARE	DRIVE SIZE HEXAGON	SHANK DIA.	LENGTH	WT. LBS.
7151	5/8"	5/8"	13/16"	3"	.32
7152	5/8"	5/8"	13/16"	5"	.60
*7153	5/8"	5/8"	13/16"	8"	1.10
*7157	5/8"	3/4"	7/8"	3"	.45



EXTENSION BAR

5/8" female by 5/8" male

TOOL NO.	SQ. DRIVE SIZE	SHANK DIA.	LENGTH	WT. LBS.
7185-P	5/8"	3/4"	7½"	1.08
7186-P	5/8"	13/16"	5"	.80
7187-P	5/8"	13/16"	7"	1.00
7189-P	5/8"	13/16"	9"	1.30
7190-P	5/8"	13/16"	10"	1.40

7657

7656

POWER ADAPTERS

TOOL NO.	DRIVE SIZE FEMALE	DRIVE SIZE MALE	MAJOR DIA.	LENGTH	WT. LBS.
7654	½" SQ.	5/8" SQ.	1 1/16"	1¾"	.28
7655	5/8" SQ.	½" SQ.	1¼"	1⅞"	.37
7656	5/8" SQ.	¾" SQ.	1¼"	2"	.42
7657	¾" SQ.	5/8" SQ.	1½"	1 15/16"	.52

DEEP LENGTH SOCKETS—HEXAGON / 6-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
7518H	B	9/16"	.91"	1.13"	.44"	2.81"	3½"	.58
7520H	B	5/8"	1.00"	1.19"	.47"	2.81"	3½"	.65
7522H	B	11/16"	1.13"	1.25"	.52"	2.81"	3½"	.75
7524H	B	3/4"	1.19"	1.25"	.56"	2.81"	3½"	.73
7526H	A	13/16"	1.25"	1.25"	.61"	2.81"	3½"	.70
7528H	A	7/8"	1.28"	1.28"	.66"	2.81"	3½"	.74
7530H	A	15/16"	1.38"	1.38"	.70"	2.69"	3½"	.90
7532H	A	1"	1.44"	1.44"	.75"	2.69"	3½"	1.00
7534H	A	1 1/16"	1.50"	1.50"	.80"	2.69"	3½"	.93
7536H	A	1 1/8"	1.56"	1.56"	.84"	2.69"	3½"	1.00
7538H	A	1 3/16"	1.69"	1.69"	.88"	2.69"	3½"	1.21
7540H	A	1 1/4"	1.75"	1.75"	.94"	2.69"	3½"	1.30
7542H	A	1 5/16"	1.88"	1.88"	.94"	2.69"	3½"	1.55
7544H	A	1 3/8"	1.94"	1.94"	1.03"	2.63"	3½"	1.63
7546H	A	1 7/16"	2.00"	2.00"	1.08"	2.63"	3½"	1.75
†7548H	A	1½"	2.06"	2.06"	1.13"	2.56"	3½"	1.67

DEEP LENGTH SOCKETS—HEXAGON / 6-POINT SURFACE DRIVE

7518HS	B	9/16"	.91"	1.13"	.34"	2.81"	3½"	.59
7520HS	B	5/8"	1.00"	1.13"	.41"	2.81"	3½"	.56
7522HS	A	11/16"	1.19"	1.19"	.44"	2.81"	3½"	.60
7524HS	A	3/4"	1.19"	1.19"	.47"	2.81"	3½"	.62
7526HS	A	13/16"	1.25"	1.25"	.50"	2.81"	3½"	.70
7528HS	A	7/8"	1.28"	1.28"	.56"	2.81"	3½"	.72

DEEP LENGTH SOCKETS — DOUBLE SQUARE / 8 PT.

*7518-S	B	9/16"	1.09"	1.19"	.44"	2 9/16"	3¼"	1.05
*7520-S	A	5/8"	1.19"	1.19"	.50"	2 9/16"	3¼"	1.00
*7522-S	A	11/16"	1.25"	1.25"	.53"	2 9/16"	3¼"	.95
*7524-S	A	3/4"	1.38"	1.38"	.56"	2 9/16"	3¼"	.95
*7526-S	A	13/16"	1.50"	1.50"	.59"	2 11/16"	3⅜"	1.35
*7528-S	A	7/8"	1.56"	1.56"	.62"	2 11/16"	3⅜"	1.30
*7530-S	A	15/16"	1.62"	1.62"	.66"	2 13/16"	3½"	1.40
*7532-S	A	1"	1.75"	1.75"	.68"	2 13/16"	3½"	1.60
*7534-S	A	1 1/16"	1.88"	1.88"	.75"	2 13/16"	3½"	2.20
*7536-S	A	1 1/8"	2.00"	2.00"	.81"	2 13/16"	3½"	2.20

REGULAR LENGTH SOCKETS—HEXAGON / 6-POINT

7618H	B	9/16"	.91"	1.13"	.44"	1½"	2.56"	.18
7620H	B	5/8"	1.00"	1.19"	.47"	1½"	2.44"	.22
7622H	B	11/16"	1.13"	1.25"	.52"	1½"	2.44"	.36
7624H	B	3/4"	1.19"	1.25"	.56"	1¾"	2.44"	.28
7626H	A	13/16"	1.25"	1.25"	.61"	1¾"	2.44"	.32
7628H	A	7/8"	1.28"	1.28"	.66"	1¾"	2.44"	.30
7630H	A	15/16"	1.38"	1.38"	.70"	2"	2.69"	.50
7632H	A	1"	1.44"	1.44"	.75"	2"	2.69"	.57
7634H	A	1 1/16"	1.50"	1.50"	.80"	2"	2.69"	.56
†7636H	A	1 1/8"	1.56"	1.56"	.84"	2"	2.69"	.54
7638H	A	1 3/16"	1.69"	1.69"	.88"	2"	2.69"	.66
7640H	A	1 1/4"	1.75"	1.75"	.94"	2"	2.69"	.68
7642H	A	1 5/16"	1.88"	1.88"	.94"	2"	2.69"	.87
7644H	A	1 3/8"	1.94"	1.94"	1.03"	2¼"	2.63"	1.02
7646H	A	1 7/16"	2.00"	2.00"	1.08"	2¼"	2.63"	1.02
†7648H	A	1½"	2.06"	2.06"	1.13"	2⅜"	2.56"	1.30

REGULAR LENGTH SOCKETS—HEXAGON / 6-POINT SURFACE DRIVE

7618HS	B	9/16"	.91"	1.06"	.34"	.81"	1½"	.19
7620HS	B	5/8"	1.00"	1.13"	.41"	.81"	1½"	.23
7622HS	A	11/16"	1.13"	1.13"	.44"	.81"	1½"	.23
7624HS	A	3/4"	1.19"	1.19"	.47"	1.06"	1¾"	.32
7626HS	A	13/16"	1.25"	1.25"	.50"	1.06"	1¾"	.33
7628HS	A	7/8"	1.28"	1.28"	.56"	1.06"	1¾"	.33

REGULAR LENGTH SOCKETS — DOUBLE SQUARE (8-POINT)

7618S	B	9/16"	1.09"	1.19"	.38"	.69"	1½"	.28
7620S	A	5/8"	1.19"	1.19"	.41"	.81"	1½"	.32
7622S	A	11/16"	1.25"	1.25"	.44"	.81"	1½"	.30
7624S	A	3/4"	1.38"	1.38"	.47"	.78"	1½"	.39
7626S	A	13/16"	1.50"	1.50"	.53"	.91"	1⅝"	.55
7628S	A	7/8"	1.56"	1.56"	.59"	.91"	1⅝"	.56
7630S	A	15/16"	1.63"	1.63"	.66"	1.00"	1¾"	.66
7632S	A	1"	1.75"	1.75"	.69"	1.00"	1¾"	.80
7634S	A	1 1/16"	1.81"	1.81"	.75"	1.22"	2"	.93
7636S	A	1 1/8"	1.94"	1.94"	.75"	1.19"	2"	1.08

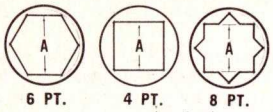
†Can be used for Budd Wheels. *Request price and delivery

¾" SQUARE DRIVE POWER SOCKETS

PROTO PROFESSIONAL TOOLS

3/4"

DIMENSION CODE



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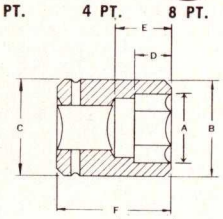

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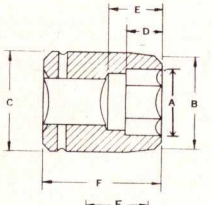
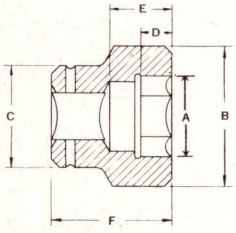
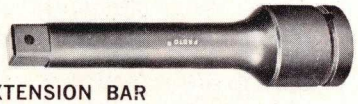


TYPE C



UNIVERSAL JOINT

TOOL NO.	SQ. DRIVE SIZE	MAJOR DIA.	LENGTH	WT., LBS.
07570	¾"	1¾"	4¼"	1.6



EXTENSION BAR

¾" female by ¾" male

TOOL NO.	SQ. DRIVE SIZE	SHANK DIA.	LENGTH	WT. LBS.
07567	¾"	1"	7"	2.0
07568	¾"	1"	10"	2.5
07569	¾"	1"	13"	4.3

07656

07655

IMPACT POWER ADAPTERS

TOOL NO.	DRIVE SIZE FEMALE	DRIVE SIZE MALE	MAJOR DIA.	LENGTH	WT. LBS.
07655	¾" SQ.	1" SQ.	1⅝"	2¼"	.76
07656	1" SQ.	¾" SQ.	2⅛"	2¾"	1.30

¾" SQUARE DRIVE "O" RINGS AND RETAINING PINS

NO.	DESCRIPTION
07500R	"O" Ring f/07509 through 07515L & 07516 through 07524LS, 07655, 07567, 7657.
07500P	Retaining Pin f/07500R

May be purchased separately.

See page 98 for Metric sizes.
See page 58 for Standard sizes.

REGULAR LENGTH SOCKET—SQUARE/4-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
07510-SS	B	⅝"	1.25"	1.63"	.50"	15/16"	1⅞"	.72
07511-SS	B	11/16"	1.34"	1.63"	.56"	15/16"	1⅞"	.70
†07513-SS	A	13/16"	1.63"	1.63"	.53"	1"	2"	.80

DEEP LENGTH SOCKET—SQUARE/4-POINT

†07513SL	A	13/16"	1.63"	1.63"	.53"	3.00"	4"	1.78

REGULAR LENGTH SOCKET—HEXAGON/6-POINT

07509	B	9/16"	1.00"	1.63"	.56"	.75"	1⅞"	.65
07510	B	⅝"	1.09"	1.63"	.56"	.75"	1⅞"	.65
07511	B	11/16"	1.16"	1.63"	.56"	.75"	115/16"	.67
07512	B	¾"	1.25"	1.63"	.63"	.94"	115/16"	.68
07513	B	13/16"	1.38"	1.63"	.63"	.94"	115/16"	.68
07514	B	⅞"	1.50"	1.63"	.69"	1.00"	2"	.70
07515	A	15/16"	1.63"	1.63"	.69"	1.00"	2"	.76
07516	A	1"	1.63"	1.63"	.69"	1.06"	21/16"	.90
07517	A	1 1/16"	1.63"	1.63"	.75"	1.06"	21/16"	.90
07518	A	1⅛"	1.75"	1.75"	.75"	1.06"	23/16"	.92
07519	C	1 3/16"	1.88"	1.75"	.75"	1.13"	23/16"	1.08
07520	C	1¼"	2.00"	1.75"	.75"	1.13"	23/16"	1.15
07521	C	1 5/16"	2.06"	1.75"	.75"	1.13"	23/16"	1.19
07522	C	1⅜"	2.13"	1.75"	.81"	1.13"	2¼"	1.25
07523	C	1 7/16"	2.25"	1.75"	.81"	1.16"	25/16"	1.43
†07524	C	1½"	2.31"	1.75"	.88"	1.16"	25/16"	1.43

DEEP LENGTH SOCKETS—HEXAGON/6-POINT

07509L	B	9/16"	1.00"	1.63"	.56"	1⅝"	3"	1.22
07510L	B	⅝"	1.09"	1.63"	.56"	1⅝"	3"	1.22
07511L	B	11/16"	1.16"	1.63"	.56"	1⅝"	3"	1.20
07512L	B	¾"	1.25"	1.63"	.63"	1⅝"	3"	1.20
07513L	B	13/16"	1.38"	1.63"	.63"	1⅝"	3"	1.20
07514L	B	⅞"	1.50"	1.63"	.69"	1⅝"	3"	1.20
07515L	A	15/16"	1.63"	1.63"	.69"	1⅝"	3"	1.24
07516L	A	1"	1.63"	1.63"	.69"	2"	3"	1.30
07517L	A	1 1/16"	1.63"	1.63"	.75"	2"	3"	1.28
07518L	A	1⅛"	1.75"	1.75"	.75"	2"	3"	1.22
07519L	C	1 3/16"	1.88"	1.75"	.75"	23/16"	3¼"	1.54
07520L	C	1¼"	2.00"	1.75"	.75"	23/16"	3¼"	1.72
07521L	C	1 5/16"	2.06"	1.75"	.75"	23/16"	3¼"	1.90
†07522L	C	1⅜"	2.30"	1.75"	.81"	25/16"	3¼"	1.82
07523L	C	1 7/16"	2.25"	1.75"	.81"	2⅜"	3½"	2.22
†07524L	C	1½"	2.31"	1.75"	.88"	2⅜"	3½"	2.60

REGULAR LENGTH SOCKETS—DOUBLE SQUARE/8-POINT

07512S	A	¾"	1.63"	1.63"	.50"	⅞"	1⅞"	.74
07513S	A	13/16"	1.63"	1.63"	.53"	15/16"	115/16"	.72
07514S	A	⅞"	1.75"	1.75"	.63"	1"	2"	.92
07515S	C	15/16"	1.81"	1.63"	.59"	1 1/16"	2 1/16"	.97
07516S	C	1"	2.00"	1.75"	.63"	1 1/16"	2⅛"	1.15
07517S	C	1 1/16"	2.13"	1.75"	.66"	1⅛"	23/16"	1.22
07518S	C	1⅛"	2.25"	1.75"	.69"	1 3/16"	2¼"	1.47
07519S	C	1 3/16"	2.38"	1.75"	.72"	1 3/16"	25/16"	1.60
07520S	C	1¼"	2.38"	1.75"	.75"	1¼"	2⅜"	1.58
07521S	C	1 5/16"	2.50"	1.75"	.81"	1 1/16"	23/16"	1.70

DEEP LENGTH SOCKETS—DOUBLE SQUARE/8-POINT

*07708-S	B	½"	1.06"	1.63"	.38"	2 1/16"	3"	1.30
*07709-S	B	9/16"	1.16"	1.36"	.44"	2 1/16"	3"	1.30
*07710-S	B	⅝"	1.25"	1.63"	.50"	2 1/16"	3"	1.30
*07711-S	B	11/16"	1.34"	1.63"	.56"	2 1/16"	3"	1.20
*07713-S	A	13/16"	1.63"	1.63"	.62"	2 1/16"	3"	1.25
07714S	A	⅞"	1.75"	1.75"	.63"	2 1/16"	3"	1.46
07715S	C	15/16"	1.81"	1.75"	.69"	2 1/16"	3"	1.52
07716S	C	1"	2.00"	1.75"	.69"	2 1/16"	3"	1.75
07717S	C	1 1/16"	2.13"	1.75"	.75"	2 1/16"	3"	1.92
07718S	C	1⅛"	2.25"	1.75"	.75"	2 1/16"	3"	2.00
07719S	C	1 3/16"	2.38"	1.75"	.75"	25/16"	3¼"	2.40
07720S	C	1¼"	2.38"	1.75"	.75"	25/16"	3¼"	2.60
07721S	C	1 5/16"	2.50"	1.75"	.78"	25/16"	3¼"	2.62

†Designed for Budd Wheels. (See page 70) *Request price and delivery*

¾" / 1" SQUARE DRIVE POWER SOCKETS

PROTO® PROFESSIONAL TOOLS

See page 98 for Metric sizes.
See pages 58 for Standard sizes.

Fedl. Specs.: GGG-W-660. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

¾"

TYPE A

TYPE C

BUDD WHEEL POWER-IMPACT SOCKET

Specially designed Proto sockets with 13/16" and 15/16" square and 1½" and 1¾" hex openings speed the job of changing Budd wheels. They are available in ⅝" square drive power, ¾" power, ¾" impact and 1" impact types. Socket 07513SL has a stop in the square opening base at the correct depth to prevent damage to inner nut threads. The 07513SL, 07524L and 10024L, (See page 71) are extra deep to clear most hubs without using extensions.

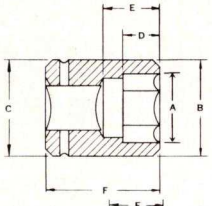
TOOL NO.	TYPE	NORMAL OPENING	TYPE SOCKET	DRIVE SIZE	TOTAL LENGTH	WT. LBS.
07513-SL	A	13/16" SQ.	BUDD WHEEL	¾"	4"	1.78
07513-SS	A	13/16" SQ.	POWER	¾"	2"	.80
07524-L	C	1½" HEX.	POWER	¾"	3½"	2.60

1"

SQUARE DRIVE POWER SOCKETS

DIMENSION CODE

TYPE A



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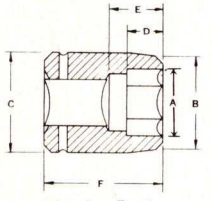

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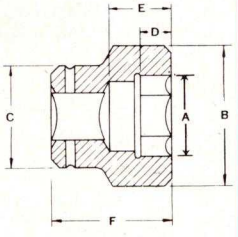


REGULAR LENGTH SOCKETS

TYPE A

TYPE B

TYPE C

DEEP LENGTH SOCKETS

1" SQUARE DRIVE REGULAR AND DEEP LENGTH SOCKETS—SQUARE/4-POINT

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER NUT END (B)	OUTSIDE DIAMETER DRIVE END (C)	OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
10012SS	B	¾"	1.88"	2.13"	.63"	13/16"	2 5/16"	1.56
†10013SS	B	13/16"	1.95"	2.13"	.63"	13/16"	2 5/16"	1.65
10014SS	B	⅞"	2.00"	2.13"	.63"	13/16"	2 5/16"	1.61
†10015SS	B	15/16"	2.06"	2.13"	.63"	13/16"	2 5/16"	1.61
10016SS	A	1"	2.13"	2.13"	.69"	1¼"	2⅜"	1.61
10017SS	A	1 1/16"	2.13"	2.13"	.75"	1¼"	2⅜"	1.61

REGULAR LENGTH SOCKETS—HEXAGON/6-POINT

10012	B	¾"	1.44"	2.13"	.59"	1⅛"	2 5/16"	1.48
10013	B	13/16"	1.50"	2.13"	.63"	1⅛"	2 5/16"	1.46
10014	B	⅞"	1.53"	2.13"	.66"	1⅛"	2 5/16"	1.04
10015	B	15/16"	1.59"	2.13"	.75"	1⅛"	2 5/16"	1.45
10016	B	1"	1.69"	2.13"	.75"	1¼"	2⅜"	1.49
10017	B	1 1/16"	1.75"	2.13"	.88"	1¼"	2 7/16"	1.46
▪10018	B	1⅛"	1.81"	2.13"	.88"	1¼"	2 7/16"	1.48
10019	B	13/16"	1.88"	2.13"	.88"	1¼"	2 7/16"	1.42
10020	A	1¼"	2.13"	2.13"	.94"	1⅜"	2½"	1.57
10021	A	15/16"	2.13"	2.13"	1.00"	1 7/16"	2 9/16"	1.54
10022	A	1⅜"	2.13"	2.13"	1.03"	1½"	2⅝"	1.50
10023	C	1 7/16"	2.25	2.13	1.06"	1½"	2 11/16"	1.74
▪10024	A	1½"	2.38"	2.38"	1.13"	1 9/16"	2¾"	1.82
10025	A	1 9/16"	2.38"	2.38"	1.13"	1⅝"	2 13/16"	2.14
10026	A	1⅝"	2.38"	2.38"	1.13"	1 11/16"	2⅞"	2.09
10027	C	1 11/16"	2.56"	2.38"	1.13"	1¾"	2 15/16"	2.36
10028	C	1¾"	2.63"	2.38"	1.25"	1 13/16"	3"	2.52
10029	C	1 13/16"	2.75"	2.38"	1.31"	1⅞"	3 1/16"	2.74
10030	C	1⅞"	2.75"	2.38"	1.31"	1 15/16"	3⅛"	2.60
10031	C	1 15/16"	2.88"	2.38"	1.31"	2"	3 3/16"	3.16
10032	C	2"	3.00"	2.38"	1.44"	2 1/16"	3¼"	3.36
10033	C	2 1/16"	3.00"	2.38"	1.44"	2⅛"	3 5/16"	3.20
10034	C	2⅛"	3.13"	2.38"	1.50"	2 3/16"	3⅜"	3.48
10035	C	2 3/16"	3.25"	2.38"	1.56"	2¼"	3 7/16"	3.92
10036	C	2¼"	3.25"	2.38"	1.56"	2 5/16"	3½"	4.10
10037	C	2 5/16"	3.38"	2.38"	1.56"	2 3/16"	3 9/16"	4.18
10038	C	2⅜"	3.50"	2.38"	1.56"	2¼"	3⅝"	4.7
10039	C	2 7/16"	3.50"	2.38"	1.56"	2⅜"	3⅞"	4.7
10040	C	2½"	3.63"	2.38"	1.56"	2½"	4"	5.3
10041	C	2 9/16"	3.75"	2.38"	1.56"	2½"	4"	5.9
10042	C	2⅝"	3.75"	2.38"	1.56"	2½"	4"	5.6
10043	C	2 11/16"	3.88"	2.38"	1.56"	2¾"	4¼"	6.6
10044	C	2¾"	3.88"	2.38"	1.56"	2¾"	4¼"	6.1
10045	C	2 13/16"	4.00"	2.38"	1.63"	2¾"	4⅜"	7.1
10046	C	2⅞"	4.00"	2.38"	1.63"	2¾"	4⅜"	6.7
10047	C	2 15/16"	4.13"	2.38"	1.69"	3"	4⅝"	7.9
10048	C	3"	4.25"	2.38"	1.75"	3"	4⅝"	8.1
10050	C	3⅛"	4.38"	2.38"	1.75"	3⅛"	4¾"	8.6
10052	C	3¼"	4.50"	2.38"	1.88"	3⅛"	4¾"	9.1
10054	C	3⅜"	4.63"	2.38"	2.00"	3"	4¾"	9.3
10056	C	3½"	4.75"	2.38"	2.00"	3"	4¾"	9.5
10058	C	3⅝"	5.00"	2.38"	2.00"	3"	4⅞"	10.0

DEEP LENGTH SOCKETS—HEXAGON/6-POINT

10013L	B	13/16"	1.50"	2.13"	.63"	2⅜"	3½"	2.32
10014L	B	⅞"	1.53"	2.13"	.63"	2⅜"	3½"	2.34
10015L	B	15/16"	1.59"	2.13"	.75"	2⅜"	3½"	2.30
10016L	B	1"	1.69"	2.13"	.75"	2⅜"	3½"	2.34
10017L	B	1 1/16"	1.75"	2.13"	.88"	2⅜"	3½"	2.38

†Designed for Budd Wheels. ▪Suitable for Budd Wheels.

1″ SQUARE DRIVE POWER SOCKETS / ATTACHMENTS

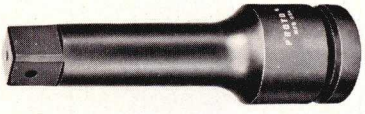
PROTO® PROFESSIONAL TOOLS

1″

See page 98 for Metric sizes.
See page 59 for Standard sizes

POWER SOCKET
SQ. DR. UNIVERSAL JOINTS

TOOL NO.	SQ. DRIVE SIZE	SHANK DIA.	LENGTH	WT. LBS.
10670	1″	2 3/8″	4 5/16″	3.0



EXTENSION BAR

1″ female by 1″ male

TOOL NO.	SQ. DRIVE SIZE	SHANK DIA.	LENGTH	WT. LBS.
10607	1″	1 3/8″	7 1/2″	4.0
10608	1″	1 3/8″	10″	4.8
10609	1″	1 3/8″	13″	6.0

10004

10005

SQUARE & SPLINE DRIVE ADAPTERS

TOOL NO.	DRIVE SIZE			MAJ DIA.	LENGTH	WT. LBS.
	TYPE	FEMALE	MALE			
10004	B	1″ SQ.	1 1/2″ SQ.	2 1/4″	3 3/4″	3.0
10005	B	1″ SQ.	#5 SPL.	2 1/4″	4 1/4″	2.6
07656	A	1″ SQ.	3/4″ SQ.	1 15/16″	2 3/4″	1.3

1″ SQUARE DRIVE
"O" RINGS AND RETAINING PINS

NO.	DESCRIPTION
10000R1	"O" Ring f/10012 through 10020L, 10021, 10022, 10023, 10024SP, 07656, 10607
10000P1	Retaining Pin f/10000R1
10000R2	"O" Ring f/10020S, 10021S, 10023S, 10024, 10024L through 10050
10000P2	Retaining Pin f/10000R2

DEEP LENGTH SOCKETS — HEXAGON / 6 PT.

NO.	TYPE	NOMINAL OPENING SIZE (A)	OUTSIDE DIAMETER		OPENING DEPTH (D)	BOLT DEPTH (E)	TOTAL LENGTH (F)	WT., LBS.
			NUT END (B)	DRIVE END (C)				
10018L	B	1 1/8″	1.81″	2.13″	.88″	2 3/8″	3 1/2″	2.34
10019L	B	1 3/16″	1.88″	2.13″	.88″	2 3/8″	3 1/2″	2.28
10020L	A	1 1/4″	2.13″	2.13″	.94″	2 3/8″	3 1/2″	2.30
10021L	A	1 5/16″	2.13″	2.13″	1.00″	2 3/8″	3 1/2″	2.25
10022L	A	1 3/8″	2.13″	2.13″	1.03″	2 3/8″	3 1/2″	2.02
10023L	C	1 7/16″	2.25″	2.13″	1.06″	2 3/8″	3 1/2″	2.28
10024L	A	1 1/2″	2.38″	2.38″	1.13″	2 3/8″	3 1/2″	2.26
10025L	A	1 9/16″	2.38″	2.38″	1.13″	2 5/8″	3 3/4″	2.78
10026L	A	1 5/8″	2.38″	2.38″	1.13″	2 7/8″	4″	2.82
10028L	C	1 3/4″	2.63″	2.38″	1.25″	2 7/8″	4″	3.46
10029L	C	1 13/16″	2.75″	2.38″	1.31″	2 7/8″	4″	3.50
10030L	C	1 7/8″	2.75″	2.38″	1.31″	3 1/8″	4 1/4″	3.85
10031L	C	1 15/16″	2.88″	2.38″	1.31″	3 1/8″	4 1/4″	4.20
10032L	C	2″	3.00″	2.38″	1.44″	3 1/8″	4 1/4″	4.52
10033L	C	2 1/16″	3.00″	2.38″	1.44″	3 1/8″	4 1/4″	4.26
10034L	C	2 1/8″	3.13″	2.38″	1.50″	3 1/4″	4 1/2″	4.84
10035L	C	2 3/16″	3.25″	2.38″	1.56″	3 1/4″	4 1/2″	5.50
10036L	C	2 1/4″	3.25″	2.38″	1.56″	3 1/4″	4 1/2″	5.48
10037L	C	2 5/16″	3.38″	2.38″	1.56″	3 1/4″	4 1/2″	5.34
10038L	C	2 3/8″	3.50″	2.38″	1.56″	3 1/2″	4 3/4″	5.60
10041-L	C	2 9/16″	3.75″	2.38″	1.56″	3 1/2″	4 3/4″	8.0
10044-L	C	2 3/4″	3.88″	2.38″	1.56″	3 9/16″	5″	9.3

REGULAR LENGTH SOCKETS—DOUBLE SQUARE / 8-POINT

10018S	C	1 1/8″	2.25″	2.13″	.75″	1 1/4″	2 1/2″	1.93
10019S	A	1 3/16″	2.38″	2.38″	.75″	1 3/8″	2 1/2″	2.08
10020S	A	1 1/4″	2.38″	2.38″	.75″	1 3/8″	2 1/2″	2.07
10021S	C	1 5/16″	2.50″	2.38″	.81″	1 1/2″	2 5/8″	2.42
10022S	C	1 3/8″	2.63″	2.38″	.88″	1 1/2″	2 5/8″	2.56
10023S	C	1 7/16″	2.69″	2.38″	.94″	1 5/8″	2 3/4″	2.74
10024S	C	1 1/2″	2.75″	2.38″	.94″	1 5/8″	2 3/4″	2.76
10025S	C	1 9/16″	2.88″	2.38″	.94″	1 11/16″	2 13/16″	3.11
10026S	C	1 5/8″	3.00″	2.38″	1.00″	1 3/4″	2 7/8″	3.45
10027S	C	1 11/16″	3.13″	2.38″	1.06″	1 13/16″	2 15/16″	3.66
10028S	C	1 3/4″	3.25″	2.38″	1.06″	1 7/8″	3″	3.92
10029S	C	1 13/16″	3.25″	2.38″	1.13″	1 15/16″	3 1/16″	3.90
10030S	C	1 7/8″	3.38″	2.38″	1.13″	2″	3 1/8″	4.22
10031S	C	1 15/16″	3.50″	2.38″	1.13″	2 1/16″	3 3/16″	4.62
10032S	C	2″	3.63″	2.38″	1.13″	2 1/8″	3 1/4″	4.62
10033-S	C	2 1/16″	3.63″	2.38″	1.22″	2 1/8″	3 5/16″	5.0
10035-S	C	2 3/16″	3.88″	2.38″	1.25″	2 1/4″	3 7/16″	5.8
10036-S	C	2 1/4″	3.88″	2.38″	1.31″	2 5/16″	3 1/2″	5.8
10038-S	C	2 3/8″	4.13″	2.38″	1.38″	2 7/16″	3 5/8″	6.8
10044-S	C	2 3/4″	4.63″	2.38″	1.56″	2 13/16″	4″	7.5

DEEP LENGTH SOCKETS—DOUBLE SQUARE / 8-POINT

10113S	B	1 3/16″	1.94″	2.13″	.63″	2 3/8″	3 1/2″	2.48
10114S	B	7/8″	2.00″	2.13″	.63″	2 3/8″	3 1/2″	2.48
10115S	B	1 5/16″	2.06″	2.13″	.69″	2 3/8″	3 1/2″	2.50
10116S	A	1″	2.13″	2.13″	.69″	2 3/8″	3 1/2″	2.44
10117S	A	1 1/16″	2.13″	2.13″	.75″	2 3/8″	3 1/2″	2.42
10118S	C	1 1/8″	2.25″	2.13″	.75″	2 3/8″	3 1/2″	2.56
10119S	A	1 3/16″	2.38″	2.38″	.75″	2 3/8″	3 1/2″	2.88
10120S	C	1 1/4″	2.44″	2.38″	.75″	2 3/8″	3 1/2″	3.14
10121S	C	1 5/16″	2.50″	2.38″	.81″	2 3/8″	3 1/2″	3.20
10122S	C	1 3/8″	2.63″	2.38″	.88″	2 3/8″	3 1/2″	3.20
10123S	C	1 7/16″	2.69″	2.38″	.94″	2 3/8″	3 1/2″	3.56
10124S	C	1 1/2″	2.75″	2.38″	.94″	2 3/8″	3 1/2″	3.54
10125S	C	1 9/16″	2.88″	2.38″	.94″	2 5/8″	3 3/4″	4.22
10126S	C	1 5/8″	3.00″	2.38″	1.00″	2 7/8″	4″	4.84
10127S	C	1 11/16″	3.13″	2.38″	1.06″	2 7/8″	4″	5.12
10128S	C	1 3/4″	3.25″	2.38″	1.06″	2 7/8″	4″	5.18
10129S	C	1 13/16″	3.25″	2.38″	1.13″	2 7/8″	4″	5.26
10130S	C	1 7/8″	3.38″	2.38″	1.13″	3″	4 1/4″	6.16
10131S	C	1 15/16″	3.44″	2.38″	1.13″	3″	4 1/4″	6.10
10132S	C	2″	3.63″	2.38″	1.13″	3″	4 1/4″	6.88
10133S	C	2 1/16″	3.63″	2.38″	1.19″	3″	4 1/4″	6.56
10134S	C	2 1/8″	3.75″	2.38″	1.19″	3 1/4″	4 1/2″	7.56
10135S	C	2 3/16″	3.88″	2.38″	1.25″	3 1/4″	4 1/2″	8.02
10136S	C	2 1/4″	3.88″	2.38″	1.31″	3 1/4″	4 1/2″	7.92
10138S	C	2 3/8″	4.13″	2.38″	1.38″	3 3/8″	4 3/4″	9.50

†*Designed for Budd Wheels.*

1″ / 1¼″ SQUARE DRIVE POWER SOCKETS

1″

TYPE B

BUDD WHEEL POWER-IMPACT SOCKET

Specially designed Proto sockets with 13/16″ and 15/16″ square and 1½″ and 1¾″ hex openings speed the job of changing Budd wheels. They are available in ⅝″ square drive power, ¾″ power, ¾″ impact and 1″ impact types.

TOOL NO.	TYPE	NORMAL OPENING	TYPE SOCKET	DRIVE SIZE	TOTAL LENGTH	WT. LBS.
10013-SS	B	13/16″ SQ.	IMPACT	1″	2 5/16″	1.65
10015-SS	B	15/16″ SQ.	POWER	1″	2 5/16″	1.61
10024-LS	C	1½″ HEX. - 13/16″ SQ.	POWER	1″	4″	2.70
10024-SP	B	1½″ HEX.	POWER	1″	3½″	2.70
10028-L	B	1¾″ HEX.	POWER	1″	4″	3.44

1¼″ SQUARE DRIVE POWER SOCKETS

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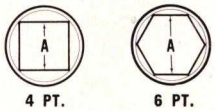


4 PT. 6 PT.

TYPE A TYPE B

TYPE C

REGULAR LENGTH SOCKETS

TYPE A TYPE B

TYPE C

DEEP LENGTH SOCKETS

REGULAR LENGTH SOCKET — SQUARE / 4 PT.

TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER NUT END	OUTSIDE DIAMETER DRIVE END	OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
*12513-SS	B	13/16″	1.93″	2.75″	.75″	1 1/16″	3″	3.8
*12515-SS	B	15/16″	2.05″	2.75″	.75″	1 1/16″	3″	3.8
*12517-SS	B	1 1/16″	2.18″	2.75″	.75″	1 1/16″	3″	3.8
*12519-SS	B	1 3/16″	2.43″	2.75″	.75″	1 1/16″	3″	3.8
*12520-SS	A	1¼″	2.75″	2.75″	.75″	1 13/16″	3¼″	4.1
*12521-SS	A	1 5/16″	2.75″	2.75″	.81″	1 13/16″	3¼″	4.1
*12523-SS	A	1 7/16″	2.75″	2.75″	.90″	1 13/16″	3¼″	3.9
*12524-SS	A	1½″	2.75″	2.75″	.93″	1 13/16″	3¼″	3.8
*12525-SS	C	1 9/16″	3.00″	2.75″	.96″	2 5/16″	3¾″	5.1
*12526-SS	C	1 5/8″	3.25″	2.75″	1.00″	2 5/16″	3¾″	5.8
*12527-SS	C	1 11/16″	3.25″	2.75″	1.06″	2 5/16″	3¾″	5.6
*12528-SS	C	1¾″	3.25″	2.75″	1.09″	2 5/16″	3¾″	5.5
*12529-SS	C	1 13/16″	3.25″	2.75″	1.12″	2 5/16″	3¾″	5.3
*12530-SS	C	1 7/8″	3.75″	2.75″	1.18″	2 13/16″	4¼″	8.2
*12532-SS	C	2″	3.75″	2.75″	1.25″	2 13/16″	4¼″	7.8
*12533-SS	C	2 1/16″	3.75″	2.75″	1.28″	2 13/16″	4¼″	7.7
*12534-SS	C	2 3/16″	3.75″	2.75″	1.37″	2 13/16″	4¼″	7.6

REGULAR LENGTH SOCKET — HEXAGON / 6 PT.

*12516	B	1″	1.93″	2.75″	.75″	1 1/16″	3″	3.8
*12518	B	1 1/8″	2.05″	2.75″	.75″	1 1/16″	3″	3.7
*12520	B	1¼″	2.05″	2.75″	.81″	1 1/16″	3″	3.6
*12521	B	1 5/16″	2.18″	2.75″	.81″	1 1/16″	3″	3.5
*12522	B	1 3/8″	2.31″	2.75″	.87″	1 1/16″	3″	3.5
*12523	B	1 7/16″	2.43″	2.75″	.90″	1 1/16″	3″	3.5
*12524	B	1½″	2.43″	2.75″	.93″	1 13/16″	3¼″	3.7
*12525	B	1 9/16″	2.68″	2.75″	.96″	1 13/16″	3¼″	3.8
*12526	B	1 5/8″	2.68″	2.75″	1.00″	1 13/16″	3¼″	3.7
*12527	A	1 11/16″	2.75″	2.75″	1.06″	1 13/16″	3¼″	3.7
*12528	A	1¾″	2.75″	2.75″	1.09″	1 13/16″	3¼″	3.5
*12529	A	1 13/16″	2.75″	2.75″	1.12″	1 13/16″	3¼″	3.4
*12530	A	1 7/8″	2.75″	2.75″	1.18″	1 13/16″	3¼″	3.3
*12531	C	1 15/16″	3.00″	2.75″	1.21″	2 5/16″	3¾″	4.4
*12532	C	2″	3.25″	2.75″	1.25″	2 5/16″	3¾″	5.0
*12533	C	2 1/16″	3.25″	2.75″	1.28″	2 5/16″	3¾″	4.9
*12534	C	2 1/8″	3.25″	2.75″	1.34″	2 5/16″	3¾″	4.8
*12535	C	2 3/16″	3.25″	2.75″	1.37″	2 5/16″	3¾″	4.7
*12536	C	2¼″	3.50″	2.75″	1.50″	2 5/16″	3¾″	5.3
*12537	C	2 5/16″	3.50″	2.75″	1.50″	2 13/16″	4¼″	5.9
*12538	C	2 3/8″	3.63″	2.75″	1.56″	2 13/16″	4¼″	6.3
*12539	C	2 7/16″	3.75″	2.75″	1.56″	2 13/16″	4¼″	6.7
*12540	C	2½″	3.75″	2.75″	1.63″	2 13/16″	4¼″	6.5
*12541	C	2 9/16″	3.75″	2.75″	1.63″	2 13/16″	4¼″	6.3
*12542	C	2 5/8″	3.75″	2.75″	1.63″	2 13/16″	4¼″	6.1
*12544	C	2¾″	4.13″	2.75″	1.75″	3 1/16″	4½″	8.0
*12545	C	2 13/16″	4.13″	2.75″	1.88″	3 1/16″	4½″	7.7
*12548	C	3″	4.50″	2.75″	2.00″	3 7/16″	4⅞″	10.0
*12550	C	3 1/8″	4.50″	2.75″	2.00″	3 7/16″	4⅞″	9.4
*12552	C	3¼″	4.75″	2.75″	2.00″	3 9/16″	5″	10.8
*12554	C	3 3/8″	4.75″	2.75″	2.00″	3 9/16″	5″	10.2
*12556	C	3½″	5.00″	2.75″	2.25″	3 13/16″	5¼″	12.0

DEEP LENGTH SOCKET — HEXAGON / 6 PT.

*12516-L	B	1″	1.93″	2.75″	.75″	2 5/16″	4″	5.2
*12518-L	B	1 1/8″	2.05″	2.75″	.75″	2 5/16″	4″	5.1
*12520-L	B	1¼″	2.18″	2.75″	.81″	2 5/16″	4″	4.9

*Request price and delivery

1¼" / 1½" SQUARE DRIVE POWER SOCKETS

PROTO PROFESSIONAL TOOLS

1¼"

TYPE A

TYPE B

TYPE C

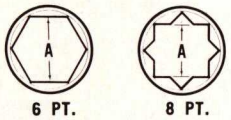
DEEP LENGTH SOCKETS

DEEP LENGTH SOCKET — HEXAGON / 6 PT.

TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER		OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
			NUT END	DRIVE END				
*12521-L	B	15/16"	2.18"	2.75"	.81"	2 9/16"	4"	4.8
*12522-L	B	1 3/8"	2.31"	2.75"	.87"	2 9/16"	4"	4.8
*12523-L	B	1 7/16"	2.43"	2.75"	.90"	2 9/16"	4"	4.7
*12524-L	B	1 1/2"	2.43"	2.75"	.93"	2 13/16"	4 1/4"	4.9
*12525-L	B	1 9/16"	2.68"	2.75"	.96"	2 13/16"	4 1/4"	4.9
*12526-L	B	1 5/8"	2.68"	2.75"	1.00"	2 13/16"	4 1/4"	4.8
*12527-L	A	1 11/16"	2.75"	2.75"	1.06"	2 13/16"	4 1/4"	4.7
*12528-L	A	1 3/4"	2.75"	2.75"	1.09"	2 13/16"	4 1/4"	4.5
*12529-L	A	1 13/16"	2.75"	2.75"	1.12"	2 13/16"	4 1/4"	4.3
*12530-L	A	1 7/8"	2.75"	2.75"	1.18"	2 13/16"	4 1/4"	4.2
*12531-L	C	1 15/16"	3.00"	2.75"	1.21"	3 1/16"	4 7/8"	5.7
*12532-L	C	2"	3.25"	2.75"	1.25"	3 1/16"	4 7/8"	6.7
*12533-L	C	2 1/16"	3.25"	2.75"	1.28"	3 1/16"	4 7/8"	6.6
*12534-L	C	2 1/8"	3.25"	2.75"	1.34"	3 1/16"	4 7/8"	6.3
*12535-L	C	2 3/16"	3.25"	2.75"	1.37"	3 1/16"	4 7/8"	6.1
*12536-L	C	2 1/4"	3.50"	2.75"	1.50"	3 1/16"	4 7/8"	7.1
*12537-L	C	2 5/16"	3.50"	2.75"	1.50"	3 7/8"	5 5/16"	7.5
*12538-L	C	2 3/8"	3.50"	2.75"	1.56"	3 7/8"	5 5/16"	8.1
*12539-L	C	2 7/16"	3.75"	2.75"	1.56"	3 7/8"	5 5/16"	8.6
*12540-L	C	2 1/2"	3.75"	2.75"	1.63"	3 7/8"	5 5/16"	8.3
*12541-L	C	2 9/16"	3.75"	2.75"	1.63"	3 7/8"	5 5/16"	8.0
*12542-L	C	2 5/8"	3.75"	2.75"	1.63"	3 7/8"	5 5/16"	7.8
*12544-L	C	2 3/4"	4.13"	2.75"	1.75"	4 1/16"	5 1/2"	10.1
*12545-L	C	2 13/16"	4.13"	2.75"	1.88"	4 1/16"	5 1/2"	9.7
*12548-L	C	3"	4.50"	2.75"	2.00"	4 9/16"	6"	12.8
*12550-L	C	3 1/8"	4.50"	2.75"	2.00"	4 9/16"	6"	12.0
*12552-L	C	3 1/4"	4.75"	2.75"	2.00"	4 9/16"	6"	13.5
*12554-L	C	3 3/8"	4.75"	2.75"	2.00"	4 9/16"	6"	12.6
*12556-L	C	3 1/2"	5.00"	2.75"	2.25"	5"	6 3/8"	15.3

1½"

DIMENSION CODE



6 PT. 8 PT.

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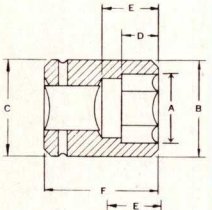

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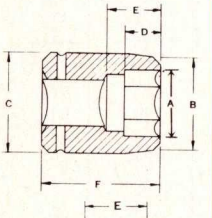

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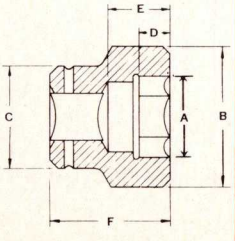


REGULAR LENGTH SOCKETS

REGULAR LENGTH SOCKETS — HEXAGON / 6 PT.

TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER		OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
			NUT END	DRIVE END				
15022	B	1 3/8"	2.50"	3.25"	.87"	2 1/8"	3 7/8"	5.80
15023	B	1 7/16"	2.50"	3.25"	.90"	2 1/8"	3 7/8"	5.62
15024	B	1 1/2"	2.50"	3.25"	.93"	2 1/8"	3 7/8"	5.90
15025	B	1 9/16"	2.78"	3.25"	.96"	2 1/8"	3 7/8"	5.52
15026	B	1 5/8"	2.78"	3.25"	1.00"	2 1/8"	3 7/8"	6.00
15027	B	1 11/16"	2.84"	3.25"	1.06"	2 1/8"	3 7/8"	5.75
15028	B	1 3/4"	2.84"	3.25"	1.09"	2 1/8"	3 7/8"	5.65
15029	B	1 13/16"	3.13"	3.25"	1.12"	2 1/8"	3 7/8"	6.10
15030	B	1 7/8"	3.13"	3.25"	1.18"	2 1/8"	3 7/8"	5.90
15031	B	1 15/16"	3.13"	3.25"	1.21"	2 1/8"	3 7/8"	5.70
15032	A	2"	3.25"	3.25"	1.25"	2 1/8"	3 7/8"	5.75
15033	A	2 1/16"	3.25"	3.25"	1.28"	2 1/8"	3 7/8"	5.70
15034	A	2 1/8"	3.25"	3.25"	1.34"	2 1/8"	3 7/8"	5.55
15035	A	2 3/16"	3.25"	3.25"	1.37"	2 1/8"	3 7/8"	5.50
15036	C	2 1/4"	3.75"	3.25"	1.50"	2 5/8"	4 3/8"	7.60
15037	C	2 5/16"	3.75"	3.25"	1.50"	2 5/8"	4 3/8"	7.45
15038	C	2 3/8"	3.75"	3.25"	1.56"	2 5/8"	4 3/8"	7.70
15039	C	2 7/16"	3.75"	3.25"	1.56"	2 5/8"	4 3/8"	7.00
15040	C	2 1/2"	3.75"	3.25"	1.63"	2 5/8"	4 3/8"	7.00
15041	C	2 9/16"	3.75"	3.25"	1.63"	2 5/8"	4 3/8"	6.80
15042	C	2 5/8"	4.13"	3.25"	1.63"	2 3/4"	4 5/8"	9.20
15043	C	2 11/16"	4.13"	3.25"	1.75"	2 3/4"	4 5/8"	9.00
15044	C	2 3/4"	4.38"	3.25"	1.75"	2 7/8"	4 3/4"	8.90
15045	C	2 13/16"	4.38"	3.25"	1.87"	2 7/8"	4 3/4"	10.0
15046	C	2 7/8"	4.50"	3.25"	1.87"	3 1/8"	5"	9.7
15047	C	2 15/16"	4.50"	3.25"	2.00"	3 1/8"	5"	11.0
15048	C	3"	4.50"	3.25"	2.00"	3 1/8"	5"	11.1
15049	C	3 1/16"	4.75"	3.25"	2.00"	3 3/8"	5 1/4"	10.0
15050	C	3 1/8"	4.75"	3.25"	2.00"	3 3/8"	5 1/4"	12.3
15051	C	3 3/16"	4.75"	3.25"	2.00"	3 3/8"	5 1/4"	12.0
15052	C	3 1/4"	5.00"	3.25"	2.00"	3 1/2"	5 3/8"	11.0
15053	C	3 5/16"	5.00"	3.25"	2.00"	3 1/2"	5 3/8"	11.9
15054	C	3 3/8"	5.00"	3.25"	2.00"	3 1/2"	5 3/8"	13.5
15055	C	3 7/16"	5.25"	3.25"	2.00"	3 3/4"	5 5/8"	13.0
15056	C	3 1/2"	5.25"	3.25"	2.25"	3 3/4"	5 5/8"	12.5
15057	C	3 9/16"	5.25"	3.25"	2.25"	3 3/4"	5 5/8"	14.8
15058	C	3 5/8"	5.25"	3.25"	2.25"	3 3/4"	5 5/8"	14.4

*Request price and delivery

1½" SQUARE DRIVE POWER SOCKETS

PROTO PROFESSIONAL TOOLS

1½" SQUARE DRIVE POWER SOCKETS

TYPE A

TYPE B

TYPE C

DEEP LENGTH SOCKETS

POWER SOCKET
SQ. DR. UNIVERSAL JOINTS

TOOL NO.	SQ. DRIVE SIZE	MAJOR DIA.	LENGTH	WT. LBS.
15670	1½"	3¼"	6⁵⁄₁₆"	8.0

POWER SOCKET
SQ. DR. EXTENSION BAR

TOOL NO.	SQ. DRIVE SIZE	SHANK DIA.	LENGTH	WT. LBS.
15097-P	1½"	2"	8"	9.0
15098-P	1½"	2"	12"	12.6
15099-P	1½"	2"	15"	15.2

REGULAR LENGTH SOCKETS — HEXAGON / 6 PT.

TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER		OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
			NUT END	DRIVE END				
15059	C	3¹¹⁄₁₆"	5.50"	3.25"	2.25"	3¾"	5¾"	16.6
15060	C	3¾"	5.50"	3.25"	2.25"	3¾"	5¾"	14.7
15061	C	3¹³⁄₁₆"	5.50"	3.25"	2.25"	3¾"	5¾"	15.8
15062	C	3⅞"	6.00"	3.25"	2.50"	3¾"	6"	21.2
15063	C	3¹⁵⁄₁₆"	6.00"	3.25"	2.50"	3¾"	6"	20.7
15064	C	4"	6.00"	3.25"	2.50"	3½"	6"	20.3
15065	C	4¹⁄₁₆"	6.00"	3.25"	2.50"	3¾"	6"	19.8
15066	C	4⅛"	6.25"	3.25"	2.75"	3¾"	6¼"	23.2
15067	C	4³⁄₁₆"	6.25"	3.25"	2.75"	3¾"	6¼"	22.6
15068	C	4¼"	6.25"	3.25"	2.75"	3¾"	6¼"	22.1
15069	C	4⁵⁄₁₆"	6.25"	3.25"	2.75"	4⅛"	6¼"	21.6
15070	C	4⅜"	6.50"	3.25"	3.00"	4"	6½"	22.3
15071	C	4⁷⁄₁₆"	6.50"	3.25"	3.00"	4"	6½"	21.7
15072	C	4½"	6.50"	3.25"	3.00"	4"	6½"	24.0
15074	C	4⅝"	6.50"	3.25"	3.00"	4"	6½"	22.8
15076	C	4¾"	6.50"	3.25"	3.00"	4"	6½"	21.6

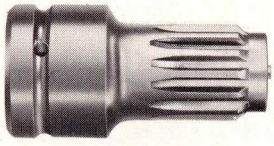
DEEP LENGTH SOCKET — HEXAGON / 6 PT.

15022L	B	1⅜"	2.50"	3.25"	.87"	3¼"	4⅞"	7.9
15023L	B	1⁷⁄₁₆"	2.50"	3.25"	.90"	3¼"	4⅞"	8.0
15024L	B	1½"	2.50"	3.25"	.93"	3¼"	4⅞"	8.0
15025L	B	1⁹⁄₁₆"	2.78"	3.25"	.96"	3¼"	4⅞"	7.7
15026L	B	1⅝"	2.78"	3.25"	1.00"	3¼"	4⅞"	7.9
15027L	B	1¹¹⁄₁₆"	2.84"	3.25"	1.06"	3¼"	4⅞"	7.8
15028L	B	1¾"	2.84"	3.25"	1.09"	3¼"	4⅞"	7.7
15029L	B	1¹³⁄₁₆"	3.13"	3.25"	1.12"	3¼"	4⅞"	7.8
15030L	B	1⅞"	3.13"	3.25"	1.18"	3¼"	4⅞"	7.4
15031L	B	1¹⁵⁄₁₆"	3.13"	3.25"	1.21"	3¼"	4⅞"	7.4
15032L	A	2"	3.25"	3.25"	1.25"	3¼"	4⅞"	7.4
15033L	A	2¹⁄₁₆"	3.25"	3.25"	1.28"	3¼"	4⅞"	7.2
15034L	A	2⅛"	3.25"	3.25"	1.34"	3¼"	5¹⁄₁₆"	7.0
15035L	A	2³⁄₁₆"	3.25"	3.25"	1.38"	3¼"	5⅛"	7.0
15036L	C	2¼"	3.75"	3.25"	1.50"	3⅝"	5³⁄₁₆"	9.9
15037L	C	2⁵⁄₁₆"	3.75"	3.25"	1.50"	3⅝"	5¼"	10.0
15038L	C	2⅜"	3.75"	3.25"	1.56"	3⅝"	5⅜"	10.0
15039L	C	2⁷⁄₁₆"	3.75"	3.25"	1.56"	3⅝"	5⅜"	9.2
15040L	C	2½"	3.75"	3.25"	1.63"	3⅝"	5½"	8.9
15041-L	C	2⁹⁄₁₆"	3.75"	3.25"	1.63"	3⅝"	5⅜"	8.9
15042-L	C	2⅝"	4.13"	3.25"	1.63"	3⅞"	5¾"	11.6
15043-L	C	2¹¹⁄₁₆"	4.13"	3.25"	1.75"	3⅞"	5¾"	11.3
15044-L	C	2¾"	4.38"	3.25"	1.75"	3⅞"	5⅞"	13.1
15045-L	C	2¹³⁄₁₆"	4.38"	3.25"	1.87"	4"	5⅞"	12.8
15046-L	C	2⅞"	4.50"	3.25"	1.87"	4"	6⅛"	14.1
15047-L	C	2¹⁵⁄₁₆"	4.50"	3.25"	2.00"	4¼"	6⅛"	13.7
15048-L	C	3"	4.50"	3.25"	2.00"	4¼"	6⅛"	13.3
15049-L	C	3¹⁄₁₆"	4.75"	3.25"	2.00"	4¼"	6⅜"	15.8
15050-L	C	3⅛"	4.75"	3.25"	2.00"	4½"	6⅜"	15:4
15051-L	C	3³⁄₁₆"	4.75"	3.25"	2.00"	4½"	6⅜"	15.0
15052-L	C	3¼"	5.00"	3.25"	2.00"	4½"	6½"	17.4
15053-L	C	3⁵⁄₁₆"	5.00"	3.25"	2.00"	4½"	6½"	17.0
15054-L	C	3⅜"	5.00"	3.25"	2.00"	4⅝"	6½"	15.6
15055-L	C	3⁷⁄₁₆"	5.25"	3.25"	2.00"	4⅝"	6⅝"	20.0
15056-L	C	3½"	5.25"	3.25"	2.25"	4¾"	6⅝"	18.6
15057-L	C	3⁹⁄₁₆"	5.25"	3.25"	2.25"	4¾"	6⅝"	18.1
15058-L	C	3⅝"	5.25"	3.25"	2.25"	4¾"	6⅝"	17.6
15059-L	C	3¹¹⁄₁₆"	5.50"	3.25"	2.25"	4⅞"	6⅞"	20.8
15060-L	C	3¾"	5.50"	3.25"	2.25"	4⅞"	6⅞"	20.3
15061-L	C	3¹³⁄₁₆"	5.50"	3.25"	2.25"	4⅞"	6⅞"	19.8
15062-L	C	3⅞"	6.00"	3.25"	2.50"	5"	7¼"	27.0
15063-L	C	3¹⁵⁄₁₆"	6.00"	3.25"	2.50"	5"	7¼"	27.0
15064-L	C	4"	6.00"	3.25"	2.50"	5"	7¼"	26.0
15065-L	C	4¹⁄₁₆"	6.00"	3.25"	2.50"	5"	7¼"	25.0
15066-L	C	4⅛"	6.25"	3.25"	2.75"	5"	7½"	29.0
15067-L	C	4³⁄₁₆"	6.25"	3.25"	2.75"	5"	7½"	29.0
15068-L	C	4¼"	6.25"	3.25"	2.75"	5"	7½"	28.0
15069-L	C	4⁵⁄₁₆"	6.25"	3.25"	2.75"	5"	7½"	27.0
15070-L	C	4⅜"	6.50"	3.25"	3.00"	5¼"	7¾"	29.0
15072-L	C	4½"	6.50"	3.25"	3.00"	5¼"	7¾"	31.0
15074-L	C	4⅝"	6.50"	3.25"	3.00"	5¼"	7¾"	29.0
15076-L	C	4¾"	6.75"	3.25"	3.00"	5¼"	7¾"	27.0

1½" / 2½" SQUARE DRIVE POWER SOCKETS

PROTO PROFESSIONAL TOOLS

1½" SQUARE DRIVE POWER SOCKETS



POWER SOCKET — SQUARE & SPLINE DRIVE ADAPTERS

TOOL NO.	DRIVE SIZE TYPE	FEMALE	MALE	MAJOR DIA.	LENGTH	WT. LBS.
15005	A	1½"SQ.	#5 SPL.	3¼"	5⅜"	6.0

REGULAR LENGTH SOCKETS — DOUBLE SQ. / 8 PT.

TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER NUT END	OUTSIDE DIAMETER DRIVE END	OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
15216	B	1"	2.37"	3.25"	.67"	2¼"	3⅞"	6.7
15218	B	1⅛"	2.50"	3.25"	.75"	2¼"	3⅞"	6.6
15219	B	1³⁄₁₆"	2.50"	3.25"	.75"	2¼"	3⅞"	6.6
15220	B	1¼"	2.78"	3.25"	.85"	2¼"	3⅞"	6.6
15222	B	1⅜"	2.84"	3.25"	.85"	2¼"	3⅞"	6.6
15223	B	1⁷⁄₁₆"	2.84"	3.25"	.90"	2¼"	3⅞"	6.6
15224	B	1½"	3.13"	3.25"	.93"	2¼"	3⅞"	6.6
15225	B	1⁹⁄₁₆"	3.13"	3.25"	.96"	2¼"	3⅞"	6.6
15226	A	1⅝"	3.25"	3.25"	1.00"	2¼"	3⅞"	6.5
15227	A	1¹¹⁄₁₆"	3.25"	3.25"	1.06"	2¼"	3⅞"	6.4
15228	A	1¾"	3.25"	3.25"	1.09"	2¼"	3⅞"	6.3
15229	C	1¹³⁄₁₆"	3.75"	3.25"	1.12"	2⅝"	4⅜"	8.7
15230	C	1⅞"	3.75"	3.25"	1.18"	2⅝"	4⅜"	8.6
15232	C	2"	3.75"	3.25"	1.27"	2⅝"	4⅜"	8.2
15235	C	2³⁄₁₆"	4.12"	3.25"	1.37"	2⅞"	4⅝"	9.9
15236	C	2¼"	4.37"	3.25"	1.47"	2⅞"	4¾"	11.2
15238	C	2⅜"	4.50"	3.25"	1.56"	3"	5"	12.3
15244	C	2¾"	5.00"	3.25"	1.75"	3½"	5⅜"	15.2
15246	C	2⅞"	5.25"	3.25"	1.88"	3¾"	5⅝"	17.4
15252	C	3¼"	6.00"	3.25"	2.00"	3⅞"	6"	23.8

RETAINING PINS & "O" RINGS

8000-50 "O" Ring for 1½" Square Drive Power Sockets

8000-51 Retaining Pin for 1½" square drive power sockets

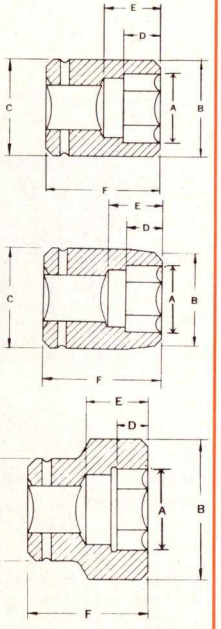
2½" SQUARE DRIVE POWER SOCKETS

6 PT.

TYPE A

TYPE B

TYPE C



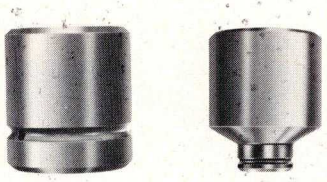
REGULAR LENGTH SOCKETS

REGULAR LENGTH SOCKETS — HEXAGON / 6 PT.

15300	B	1¾"	4.12"	5.00"	1.38 "	2⅞"	5½"	21.5
15301	B	1⅞"	4.12"	5.00"	1.38 "	2⅞"	5½"	21.4
15302	B	2"	4.12"	5.00"	1.38 "	2⅞"	5½"	21.3
15303	B	2⅛"	4.12"	5.00"	1.38 "	2⅞"	5½"	21.1
15304	B	2¼"	4.12"	5.00"	1.50 "	2⅞"	5½"	20.8
15305	B	2⅜"	4.12"	5.00"	1.56"	3"	5⅝"	20.8
15306	B	2⅝"	4.12"	5.00"	1.63 "	3"	5⅝"	20.3
15307	A	2¾"	5.00"	5.00"	1.75"	3"	5⅝"	20.3
15308	A	2¹⁵⁄₁₆"	5.00"	5.00"	1.75"	3"	5⅝"	21.3
15309	A	3"	5.00"	5.00"	2.00"	3⅜"	6"	21.5
15310	C	3⅛"	5.25"	5.00"	2.00"	3⅜"	6"	22.9
15311	C	3¼"	5.50"	5.00"	2.00"	3⅜"	6"	24.3
15312	C	3⅜"	5.75"	5.00"	2.00"	3⅜"	6"	26.0
15313	C	3½"	5.75"	5.00"	2.25"	3½"	6¼"	26.0
15314	C	3⅝"	5.75"	5.00"	2.25"	3⅞"	6½"	27.0
15315	C	3¾"	6.00"	5.00"	2.25"	3⅞"	6½"	30.0
15316	C	3⅞"	6.00"	5.00"	2.50"	4⅛"	6¾"	30.0
15317	C	4"	6.50"	5.00"	2.50	4⅛"	6¾"	33.0
15318	C	4⅛"	6.50"	5.00"	2.75"	4⅜"	7"	34.0
15319	C	4¼"	6.50"	5.00"	2.75"	4⅜"	7"	33.0
15320	C	4⅜"	7.00"	5.00"	2.87	4⅝"	7¼"	37.0
15321	C	4½"	7.00"	5.00"	2.87"	4⅝"	7¼"	38.0
15322	C	4⅝"	7.00"	5.00"	3.00"	4⅝"	7¼"	37.0
15323	C	4⅞"	7.50"	5.00"	3.00"	4⅝"	7¼"	41.0
15324	C	5"	7.50"	5.00"	3.00"	4⅞"	7½"	42.0
15325	C	5⅛"	7.50"	5.00"	3.38	5"	7¾"	42.0
15326	C	5¼"	7.75"	5.00"	3.38	5"	7¾"	44.0
15327	C	5⅜"	8.00"	5.00"	3.38"	5"	8"	50.0
15328	C	5½"	8.25"	5.00"	3.38	5"	8"	52.0
15329	C	5⅝"	8.50"	5.00"	3.38	5"	8"	55.0
15330	C	5¾"	8.75"	5.00"	3.38"	5"	8"	58.0
15331	C	6⅛"	9.00"	5.00"	3.38"	5"	8¼"	60.0
15332	C	6¼"	9.25"	5.00"	3.50"	5"	8¼"	63.0
15333	C	6½"	9.50"	5.00"	3.50"	5"	8¼"	65.0
15334	C	6⅝"	9.75"	5.00"	3.75"	5⅛"	8½"	70.0
15335	C	6¾"	10.00"	5.00"	3.75"	5⅛"	8½"	74.0
15336	C	6⅞"	10.00"	5.00"	3.75"	5⅛"	8½"	72.0
15337	C	7"	10.00"	5.00"	3.75"	5¼"	8¾"	72.0
15338	C	7⅛"	10.25"	5.00"	3.75"	5¼"	8¾"	76.0
15339	C	7¼"	10.25"	5.00"	3.75"	5½"	9"	77.0
15340	C	7½"	11.00"	5.00"	3.75"	5¾"	9¼"	97.0
15341	C	7⅝"	11.25"	5.00"	3.75"	5¾"	9¼"	99.0
15342	C	9⅛"	12.50"	5.00"	4.50"	6"	10"	104.0
15343	C	9¼"	12.75"	5.00"	4.50"	6"	10"	120.0

2½" / 3½" SQ. DR. POWER SOCKETS HEX NUT DRIVERS

2½"



TYPE A TYPE C

DEEP LENGTH SOCKETS

DEEP LENGTH SOCKETS — HEXAGON / 6 PT.

TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER NUT END	OUTSIDE DIAMETER DRIVE END	OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
15350	A	3"	5.00"	5.00"	2.00"	4⅞"	7½"	27.0
15351	C	3⅛"	5.25"	5.00"	2.00"	4⅞"	7½"	29.0
15352	C	3½"	5.75"	5.00"	2.25"	5½"	8⅛"	35.0
15353	C	3⅞"	6.00"	5.00"	2.50"	5⅞"	8½"	40.0
15354	C	4"	6.50"	5.00"	2.50"	5⅞"	8½"	44.0
15355	C	4⅛"	6.50"	5.00"	2.75"	6⅛"	8¾"	43.0
15356	C	4¼"	6.50"	5.00"	2.75"	6⅛"	8¾"	42.0
15357	C	4⅝"	7.00"	5.00"	3.00"	6⅜"	9"	48.0
15358	C	5"	7.50"	5.00"	3.00"	6¾"	9⅜"	55.0
15359	C	5⅜"	8.00"	5.00"	3.38"	7"	9¾"	63.0
15360	C	5¾"	8.75"	5.00"	3.38"	7"	9¾"	75.0
15361	C	6⅛"	9.00"	5.00"	3.50"	7"	10"	77.0
15362	C	6⅞"	10.00"	5.00"	3.75"	7¼"	10⅝"	97.0

3½"

REGULAR LENGTH SOCKET

TYPE C

DEEP LENGTH SOCKETS

TYPE C

REGULAR LENGTH SOCKET — HEXAGON / 6 PT.

15400	C	5"	8.00"	7.00"	3.00"	4"	7¾"	61.0
15401	C	5⅜"	8.25"	7.00"	3.25"	4⅜"	8 3/16"	65.0
15402	C	6⅛"	9.00"	7.00"	3.50"	5"	8¾"	73.0
15403	C	6⅞"	10.00"	7.00"	3.75"	5½"	9¼"	88.0
15404	C	7⅞"	11.00"	7.00"	4.00"	5½"	9¾"	98.0
15405	C	8⅜"	12.00"	7.00"	4.25"	5¾"	10¼"	124.0
15406	C	9⅛"	12.50"	7.00"	4.50"	6"	10¾"	130.0

DEEP LENGTH SOCKETS — HEXAGON / 6 PT.

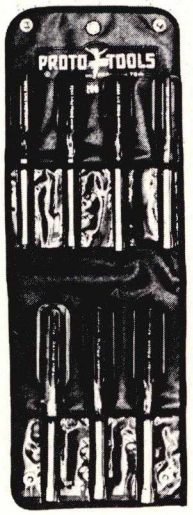
15450	C	5"	8.00"	7.00"	3.00"	6¾"	10½"	85.0
15451	C	5⅜"	8.25"	7.00"	3.25"	7⅝"	11 3/16"	92.0
15452	C	6⅛"	9.00"	7.00"	3.50"	8⅛"	11⅞"	103.0
15453	C	6⅞"	10.00"	7.00"	3.75"	8⅝"	12⅜"	125.0
15454	C	7⅞"	11.00"	7.00"	4.00"	9⅝"	13⅞"	153.0
15455	C	8⅜"	12.00"	7.00"	4.25"	9⅞"	14⅜"	192.0
15456	C	9⅛"	12.50"	7.00"	4.50"	10⅛"	14⅞"	196.0

HEX NUT DRIVERS

For Federal Specs.: See "Proto Conversion to Federal Stock Numbers." Bulletin No. 5918.

For electronics, instruments, automotive, radio and ignition work. Fluted handles of fire-resistant plastic are size coded by colors. Chrome plated hollow steel shafts clear long bolts, reduce weight. Special **heat-treated** shafts give high wear resistance for use on hardened screws or bolts . . . long life. **Precision formed drive openings** fit snugly . . . hold tight for long usage.

NO.	NOMINAL OPENING	HANDLE COLOR	TOTAL LENGTH	WT., LBS.
9206	3/16"	Black	6⅛"	.14
9207	7/32"	Brown	6⅛"	.16
9208	¼"	Red	6⅛"	.16
9209	9/32"	Orange	6⅛"	.16
9210	5/16"	Amber	6⅞"	.22
9211	11/32"	Green	6⅞"	.22
9212	⅜"	Blue	6⅞"	.22
9214	7/16"	Brown	7 3/16"	.30
9216	½"	Red	7 3/16"	.30
9218	9/16"	Orange	7 3/16"	.33
9220	⅝"	Amber	7 3/16"	.33



NO. 9200C SET

Includes 7 drivers—Nos. 9206 to 9212, in heavy-duty kit 2419. Wt. 1.44 lbs.

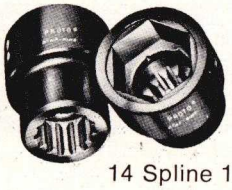
NO. 9200M SET

Includes 5 drivers—Nos 9202½ to 9205 in heavy-duty kit No. 2427. Wt. .13 lbs.

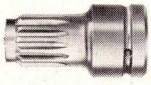
NO.	NOMINAL OPENING	LENGTH	WT., LBS.
9202½	5/64"	2½"	.02
9203	3/32"	2½"	.02
9203½	7/64"	2½"	.03
9204	⅛"	2½"	.03
9205	5/32"	2½"	.03

SPLINE DRIVE POWER SOCKETS

SPLINE DRIVE POWER SOCKETS
Standard 1.625 Drive No. 5



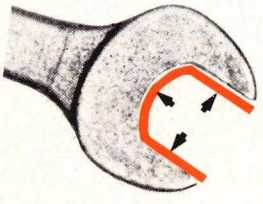
14 Spline 1⅝" I.D.



POWER SOCKET SQUARE & SPLINE DRIVE ADAPTERS

TOOL NO.	TYPE	DRIVE SIZE FEMALE	DRIVE SIZE MALE	MAJOR DIA.	LENGTH	WT. LBS.
09902	A	#5 SPL.	1" SQ.	2⅜"	4⅜"	3.9
09904	B	#5 SPL.	1½" SQ.	2⅜"	4⅞"	3.6

HOW QUALITY IS BUILT INTO PROTO TOOLS



9. BROACHING, OPEN END HEAD

Broaching is best known method of machining to close tolerance, leaving a dressed, finished surface. (Proto's skilled tool and die craftsmen make their own broaches.) Machine operators with **Go/No-go** gauges test broached openings frequently to assure continual conformity.

10. BROACH, BOX HEAD OPENING

This is the same operation as No. 9. (This "plus" operation takes the place of cold or hot slugging to approximate size. Broaching results in precise opening sizes — a part of Proto Professional Quality.)

REGULAR LENGTH SOCKETS — SQUARE / 4 PT.

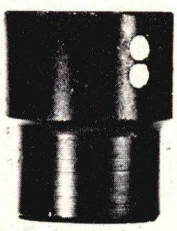
TOOL NO.	TYPE	NORMAL OPENING	OUTSIDE DIAMETER NUT END	OUTSIDE DIAMETER DRIVE END	OPENING DEPTH	BOLT DEPTH	TOTAL LENGTH	WEIGHT LBS.
* 09918-SS	A	1⅛"	2.35"	2.35"	.75"	1½"	3⅛"	2.35
* 09920-SS	A	1¼"	2.63"	2.35"	.85"	1½"	3⅛"	2.80
* 09921-SS	C	1⅜"	2.75"	2.35"	.85"	2⅛"	3⅞"	3.20
* 09924-SS	C	1½"	3.00"	2.35"	.93"	2⅛"	3⅞"	3.90

REGULAR LENGTH SOCKETS — HEXAGON / 6 PT.

09914	B	⅞"	1.88"	2.35"	.56"	1½"	3⅛"	2.00
09915	B	15⁄16"	1.88"	2.35"	.68"	1½"	3⅛"	2.00
09916	B	1"	1.88"	2.35"	.75"	1½"	3⅛"	2.10
09917	B	1 1⁄16"	1.95"	2.35"	.75"	1½"	3⅛"	2.20
09918	B	1⅛"	1.95"	2.35"	.75"	1½"	3⅛"	2.20
09919	A	1 3⁄16"	2.19"	2.35"	.75"	1½"	3⅛"	2.35
09920	B	1¼"	2.19"	2.35"	.75"	1½"	3⅛"	2.35
09921	A	1 5⁄16"	2.35"	2.35"	.81"	1½"	3⅛"	2.40
09922	A	1⅜"	2.35"	2.35"	.87"	1½"	3⅛"	2.40
09923	A	1 7⁄16"	2.35"	2.35"	.90"	1½"	3⅛"	2.40
09924	C	1½"	2.50"	2.35"	.94"	1½"	3⅛"	2.60
09925	A	1 9⁄16"	2.63"	2.35"	.97"	1½"	3⅛"	2.50
09926	C	1⅝"	2.63"	2.35"	1.00"	1½"	3⅛"	2.50
09927	C	1 11⁄16"	2.75"	2.35"	1.06"	1½"	3⅛"	2.30
09928	C	1¾"	3.00"	2.35"	1.09"	2⅛"	3⅞"	2.70
09929	C	1 13⁄16"	3.00"	2.35"	1.19"	2⅛"	3⅞"	2.70
09930	C	1⅞"	3.00"	2.35"	1.19"	2⅛"	3⅞"	2.70
09931	C	1 15⁄16"	3.12"	2.35"	1.21"	2⅛"	3⅞"	3.20
09932	C	2"	3.12"	2.35"	1.25"	2⅛"	3⅞"	3.20
09933	C	2 1⁄16"	3.12"	2.35"	1.28"	2⅛"	3⅞"	3.20
09934	C	2⅛"	3.25"	2.35"	1.31"	2⅛"	3⅞"	3.50
09935	C	2 3⁄16"	3.38"	2.35"	1.38"	2⅛"	3⅞"	3.80
09936	C	2¼"	3.50"	2.35"	1.44"	2⅛"	4 3⁄16"	3.80
09937	C	2 5⁄16"	3.63"	2.35"	1.50"	2⅛"	4 3⁄16"	4.5
09938	C	2⅜"	3.75"	2.35"	1.53"	2 3⁄16"	4 3⁄16"	4.8
09939	C	2 7⁄16"	3.75"	2.35"	1.56"	2 3⁄16"	4 3⁄16"	4.8
09940	C	2½"	3.81"	2.35"	1.63"	3"	4⅝"	5.0
09941	C	2 9⁄16"	3.88"	2.35"	1.63"	3"	4⅝"	5.6
09942	C	2⅝"	4.00"	2.35"	1.63"	3"	4⅝"	6.0
09944	C	2¾"	4.25"	2.35"	1.75"	3"	4⅝"	6.5
09945	C	2 13⁄16"	4.25"	2.35"	1.87"	3"	4¾"	6.5
09947	C	2 15⁄16"	4.25"	2.35"	2.00"	3"	4¾"	7.0
09948	C	3"	4.50"	2.35"	2.00"	3⅛"	5¼"	9.2
09950	C	3⅛"	4.50"	2.35"	2.00"	3⅛"	5½"	9.2
09952	C	3¼"	4.75"	2.35"	2.00"	3¼"	5½"	12.0

REGULAR LENGTH SOCKETS — DOUBLE SQ. / 8 PT.

* 09926-S	C	1⅝"	3.12"	2.35"	1.00"	2⅛"	3⅞"	3.6
* 09929-S	C	1 13⁄16"	3.63"	2.35"	1.12"	2 3⁄16"	4 3⁄16"	5.6
* 09930-S	C	1⅞"	3.63"	2.35"	1.18"	2 3⁄16"	4 3⁄16"	4.8
* 09932-S	C	2"	3.81"	2.35"	1.25"	3"	4⅝"	5.2



Made from Protoloy® quality steel. Heat-treated —hard and tough.

Hot broached hex openings held to close tolerances for snug fit.

Walls and corners smooth and clean-cut.

14-tooth female spline machined to close tolerances on precision gear shapers.

An internal groove fits locking devices on all spline drive impact wrenches.

Brite-Size® marking provides easy identification.

Standard 1.625 drive.

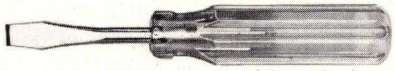
PROTO® PROFESSIONAL TOOLS

*Fedl. Specs.: GGG-S-121d. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

SCREWDRIVERS

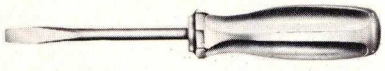
Fine alloy steel blades are heat treated entire length. Big comfortable handles give you extra gripping power, less hand slipping, less fatigue.

U/L approved handles



NO. 9602
SPECIAL STUBBY SCREWDRIVER

Turns adjusting screw on valve to set correct valve stem clearance. Heat treated alloy steel, nickel chrome finish, 1/2" x .070 blade, 8" long. Plastic handle for Cummins Diesel Engines. Wt., .36 lbs.



PLASTIC-HANDLE SCREWDRIVERS
ROUND SHANK—STANDARD TIP

Plastic handles are hand-fitted, big diameter, with large end bearing surface for great palm pressure. Deep flutes prevent screwdriver rolling. Plastic is tough, smooth, good insulator.

NO.	SHANK SIZE	BLADE LGTH.	TIP WIDTH	OV. LGTH.	WT., LBS.
*9604	15/64"	4"	5/16"	8"	.17
*9606	5/16"	6"	3/8"	10"	.30
9643	5/16"	10"	3/8"	14 3/8"	.39
*9608	3/8"	8"	7/16"	13"	.47

NO. 9622-9642
ROUND SHANK—CABINET TIP

NO.	SHANK SIZE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
9622	1/8"	2 1/2"	1/8"	5 1/4"	.04
*9623	1/8"	3"	1/8"	5 3/4"	.05
9624	1/8"	4"	1/8"	6 3/4"	.06
*9625	1/8"	5"	1/8"	7 3/4"	.05
9626	1/8"	6"	1/8"	8 3/4"	.06
*9627	1/8"	8"	1/8"	10 3/4"	.06
*9631	3/16"	3"	3/16"	6 3/8"	.10
*9632	3/16"	4"	3/16"	7 3/8"	.10
*9633	3/16"	5"	3/16"	8 3/8"	.13
*9634	3/16"	6"	3/16"	9 3/8"	.14
*9635	3/16"	8"	3/16"	11 3/8"	.15
*9636	15/64"	10"	1/4"	14"	.24
9642	15/64"	12"	1/4"	16"	.26

NO. 9701-9714
WOOD-HANDLE SCREWDRIVERS
SQUARE SHANK—STANDARD TIP

Long-time favorite sure-grip, octagon shape wood handles are seasoned hardwood.

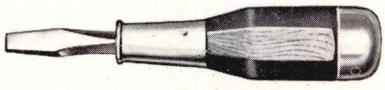
NO.	SHANK SIZE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
†9701	3/16"	1 1/2"	7/32"	4 5/16"	.09
†9702	3/16"	2 1/2"	1/4"	6 21/32"	.15
*†9704	1/4"	4 1/16"	5/16"	9 3/32"	.29
*†9706	5/16"	6"	3/8"	12 3/16"	.51
*†9708	3/8"	8"	7/16"	14 13/16"	.78
*†9710	3/8"	10"	7/16"	16 13/16"	.87
†9712	3/8"	12"	7/16"	18 13/16"	.97
†9714	7/16"	13 7/8"	1/2"	22 11/16"	1.55

NO. 9800 SERIES
SQUARE SHANK—STANDARD TIP

9801	3/16"	1 1/2"	7/32"	4 1/4"	.06
9803	1/4"	3"	5/16"	6 3/8"	.13
*9804	1/2"	4"	5/16"	8"	.19
9805	5/16"	5"	3/8"	9 3/8"	.31
*9806	5/16"	6"	3/8"	10 3/8"	.36
*9808	3/8"	8"	7/16"	13"	.55
*9810	3/8"	10"	7/16"	15"	.62
*9812	3/8"	12"	7/16"	17"	.69
9818	1/2"	18"	5/8"	27"	2.02
9822	1/8"	2 1/4"	1/8"	5 1/4"	.04
9832	3/16"	4"	1/4"	7 3/8"	.11
9833	3/16"	7 1/2"	1/4"	10 7/8"	.15
9842	1/4"	9"	5/16"	13"	.28
9843	5/16"	10"	3/8"	14 3/8"	.45

NO. 9722-9743
LONG TYPE—SQUARE SHANK—
STANDARD TIP

9722	1/8"	2 1/2"	1/8"	5 3/4"	.06
9724	1/8"	4 1/2"	1/8"	7 3/4"	.07
9732	3/16"	4"	1/4"	8 7/8"	.16
9733	3/16"	7 1/2"	1/4"	12 3/8"	.19
†9741	3/16"	9"	1/4"	13 5/32"	.21
†9742	1/4"	9 17/32"	5/16"	14 19/32"	.38
†9743	5/16"	10"	3/8"	16 3/16"	.62
†9744	1/4"	24"	5/16"	29 1/16"	.64

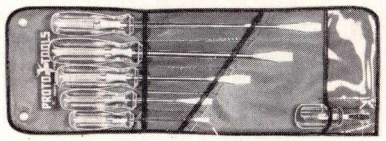


NO. 9752
SHORT TYPE—SQUARE SHANK—
STANDARD TIP

Fine for tappet work.

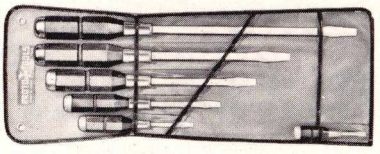
†9752	5/16"	1 11/16"	3/8"	6"	.30

NOTE:
†Has steel cap riveted to handle and blade.



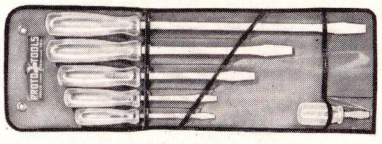
NO. 9600B SET

Standard Screwdriver Set—plastic handle, round shank. Contents: 9604, 9606, 9608, 9632, 9643, 9652. Kit 2428. Wt., 2.67 lbs.



NO. 9700A SET

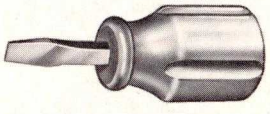
Standard Screwdriver Set—wood handle, square shank. Contents: 9701, 9702, 9704, 9706, 9708, 9712, Kit 2424. Wt., 3.40 lbs.



NO. 9800A SET

Standard Screwdriver Set—plastic handle, square shank. Contents: 9832, 9804, 9806, 9808, 9812, 9652, Kit 2425. Wt., 2.66 lbs.

SPECIAL SCREWDRIVERS



NO. 9651-9652
STUBBY PLASTIC-HANDLE
SCREWDRIVERS

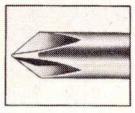
NO.	SHANK SIZE AND SHAPE	BLADE LENGTH	TIP WIDTH	OVERALL LENGTH	WT., LBS.
•9651	3/16" sq.	1"	7/32"	2 7/8"	.07
•9652	3/16" sq.	1 1/2"	9/32"	3 7/8"	.12

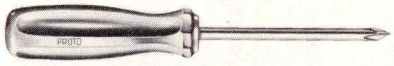
•Stubby type — for restricted clearance work.

SPECIAL SCREWDRIVERS

*Fedl. Specs.: GGG-S-121d. See "Proto Conversion to Fedl. Stock Numbers." Bulletin No. 5918.

SPECIAL SCREWDRIVERS (Cont.)

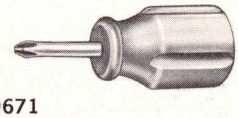




NO. 9661-9664
REED & PRINCE SCREWDRIVERS
PLASTIC HANDLES ROUND SHANKS

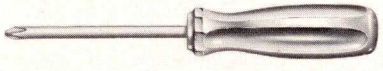
For Reed & Prince recessed head screws, now in common use. Similar to Phillips tip but more pointed taper. Heat-treated alloy steel blades are machined to close tolerances and moulded into tough, comfortable shock-proof handles. Will never loosen. 6 per carton.

NO.	SHANK DIAMETER	BLADE LENGTH	LENGTH OVERALL	WT., LBS.
9661	1/4"	1"	2 7/8"	.07
9662	3/16"	3"	6 3/8"	.09
9663	1/4"	4"	8"	.17
9664	5/16"	6"	10 3/8"	.30



NO. 9671
STUBBY PHILLIPS

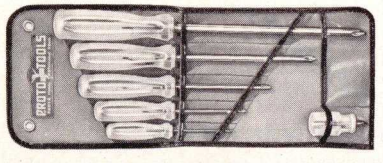
For dimensions see table below.



NO. 9680-9688
PHILLIPS PLASTIC-HANDLE SCREWDRIVERS

NO.	PHILLIPS TIP NO.	SHANK DIAMETER	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
9680	0	1/8"	2 1/2"	5 1/4"	.04
*9682	1	3/16"	3"	6 3/8"	.09
*9683	1	3/16"	8"	11 3/8"	.14
*9684	2	1/4"	4 1/4"	8 1/4"	.17
9685	2	1/4"	8"	12"	.22
*9686	3	5/16"	6"	10 3/8"	.30
*9688	4	3/8"	8"	13"	.48
•9671	2	1/4"	9/16"	2 7/16"	.07

•Stubby type — for restricted clearance work.



NO. 9600A SET

Phillips Screwdriver Set—plastic handle, round shank. Contents: 9671, 9680, 9682, 9684, 9686, 9688, Kit 2426. Wt., 1.68 lbs.

NO. 9693-9696
CLUTCH HEAD (FIG. 8 OR BUTTERFLY) SCREWDRIVERS

Bits are Type G design, preferred in service work.

NO.	TIP SIZE	NOS. OF SCREWS ACCOMMODATED: HEX HDS.	FLAT, OVAL	PAN	FILL.	BLADE LENGTH	OVER. LENGTH	WT., LBS.
9693	5/32"	8	6†	6, 10	10	4"	7 3/8"	.10
9694	3/16"	8	12‡	1/4"	1/4"	4"	7 3/8"	.10
9695	1/4"	1/4"	12	1/4"	1/4"	5"	9"	.20
9696	5/16"	5/16"	5/16"▪	3/8"	3/8"	5"	9 3/8"	.30

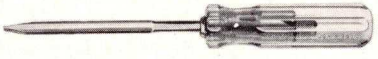
†Also #10 Hexagon. ‡Also #10 Truss & #12 Binding. ▪Also 3/8" Truss, Hex & Binding.

NO. 9782-9788
PHILLIPS WOOD-HANDLE SCREWDRIVERS

NO.	PHIL. TIP NO.	SHANK DIA.	BLADE LGTH.	OV. LGTH.	WT., LBS.
*9782	1	3/16"	3"	6 1/4"	.07
*9784	2	1/4"	4"	8 7/8"	.18
*9786	3	5/16"	6"	11 7/8"	.34
9788	4	3/8"	8"	14 1/2"	.52

PROTO PLASTIC HANDLE SCREWHOLDING SCREWDRIVERS

You can start or remove screws in hard-to-reach places with the assurance that the screw will stay on the blade—until you take it off! Three tip sizes to choose from: 1/8", 3/16" and 1/4". Alloy steel blades, heat treated and hardened. Precision ground tips. Positive gripping mechanism. Shock-proof, flameproof plastic handle, tested to stand 2500 volts.



NO. 9860

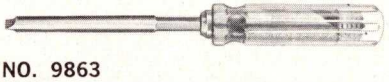
OVERALL LENGTH	BLADE LENGTH	BLADE WIDTH	BLADE THICKNESS	FITS SCREW SIZE	WT., LBS.
7 1/4"	4"	1/4"	.040	#7 - #10	.68

NO. 9861

4 1/8"	2 1/2"	1/8"	.017	#00 - #2	.21

NO. 9862

3 3/16"	1 3/16"	3/16"	.030	#3 - #6	.41

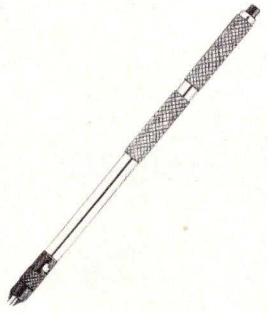


NO. 9863

5 1/16"	2 13/16"	3/16"	.030	#3 - #6	.20

PROTO LIGHTWEIGHT SCREW STARTERS

For Phillips, Reed and Prince

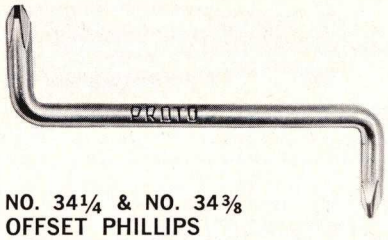


Screw-holding screwdrivers. Six sizes fit all needs. Engineered to hold screw with 5 to 9 inch-pounds pressure for starting into material, with easy twist of fingers. Powerful magnetic retrieving head.

For Standard

NO.	LENGTH	TYPE OF SCREW	WT., LBS.
9851	2 1/2"	Standard	.02
9853	5 1/2"	Standard	.04
9855	9 1/2"	Standard	.06
9882	2 3/4"	Phillips, Reed & Prince	.02
9884	6"	Phillips, Reed & Prince	.04
9886	10"	Phillips, Reed & Prince	.07

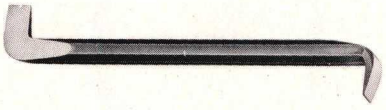
SPECIAL SCREWDRIVERS



NO. 34¼ & NO. 34⅜ OFFSET PHILLIPS SCREWDRIVERS

Short offset on each end for use in confined spaces. Precision milled points for accurate fit, maximum strength and long life. Heat treated, alloy steel assures tough durability. Two popular size points on each tool. Finish is rust-proof nickel chrome.

NO.	PHIL. TIP NO.	OV. LGTH.	WT., LBS.	PKG. PER CTN.
34¼	1 & 2	4¾"	.07	6
34⅜	3 & 4	6"	.19	6



OFFSET SCREWDRIVERS

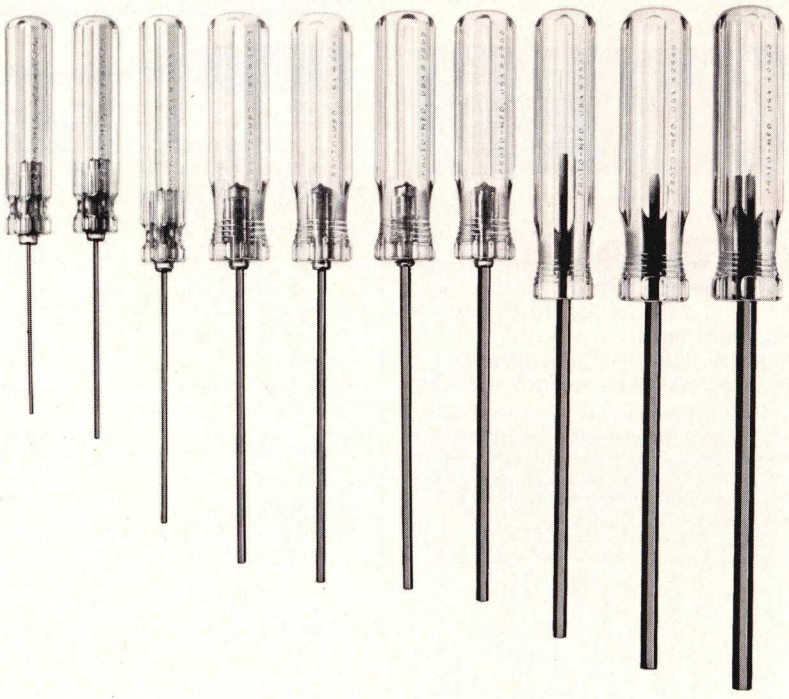
For work in close places, drag link and brake adjustments. Bits are at right angles to each other.

NO.	BIT WIDTH	LENGTH	WT., LBS.
35¼	¼"	3"	.05
*36¼	¼"	4⅝"	.07
*36⅝16	5⁄16"	5"	.11
*36⅜	⅜"	6⅛"	.19

KEY RING SCREWDRIVER

The perfect gift. Has hundreds of uses.

NO.	BIT WIDTH	LENGTH	WT., LBS.
100	3⁄16"	2¼"	.015

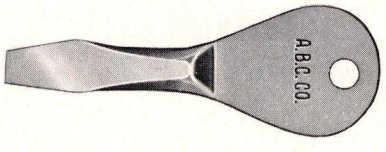


SHOCKPROOF HEX DRIVERS

Drive socket screws fast with screwdriver action. Available in 10 sizes, from .050" through 7⁄32". Shockproof Tenite II plastic handles with heat treated alloy steel and chemical black finish on blades.

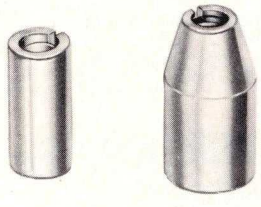
NO.	HEX SIZE	OVERALL LENGTH	WT., LBS.
9580	.050"	4⅝"	.03
9581	1⁄16"	5⅛"	.04
9582	5⁄64"	6"	.04
9583	3⁄32"	6⅜"	.06
*9584	7⁄64"	6¾"	.06
9585	⅛"	6¾"	.07
*9586	9⁄64"	7"	.07
9587	5⁄32"	7⅝"	.08
9588	3⁄16"	8"	.11
9589	7⁄32"	8⅜"	.13

*For 1960 Hollow Head Set Screws.



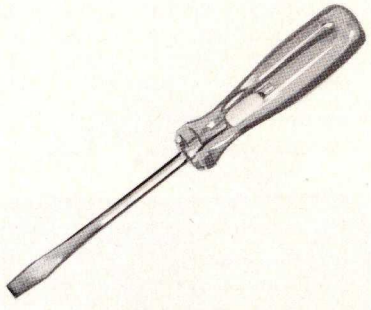
KEY RING SCREWDRIVERS

Put your name or trademark on one side. A great advertising item. Keeps your name before the public for years. Fits all standard key rings. Black finish only. Proto trademark on one side only. Write Proto for quantity prices.



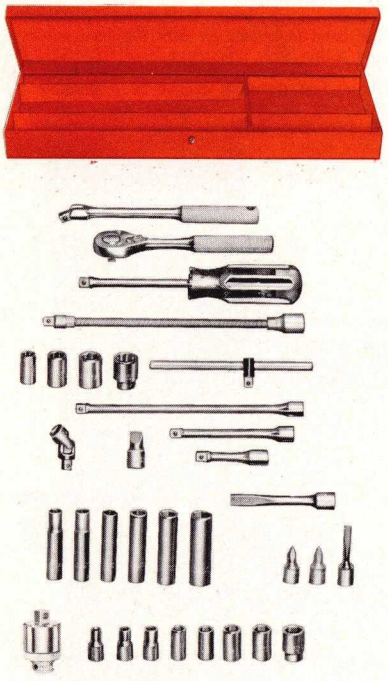
HEX BIT HOLDERS

These hex bits provide a fast, additional service. Hollow head, slotted and Phillips head drivers are available in ¼", ⅜", ½" square drives. These attachments are perfect for situations which require leverage beyond that provided by the average screwdriver or hex driver.



PROTO SCREWDRIVERS

With the right screwdriver for every job you get more done . . . finish the tough jobs faster. With Proto, your choice in types, sizes and specials is virtually unlimited (what we do not have we will make for you) — all manufactured to highest quality standard for long service.



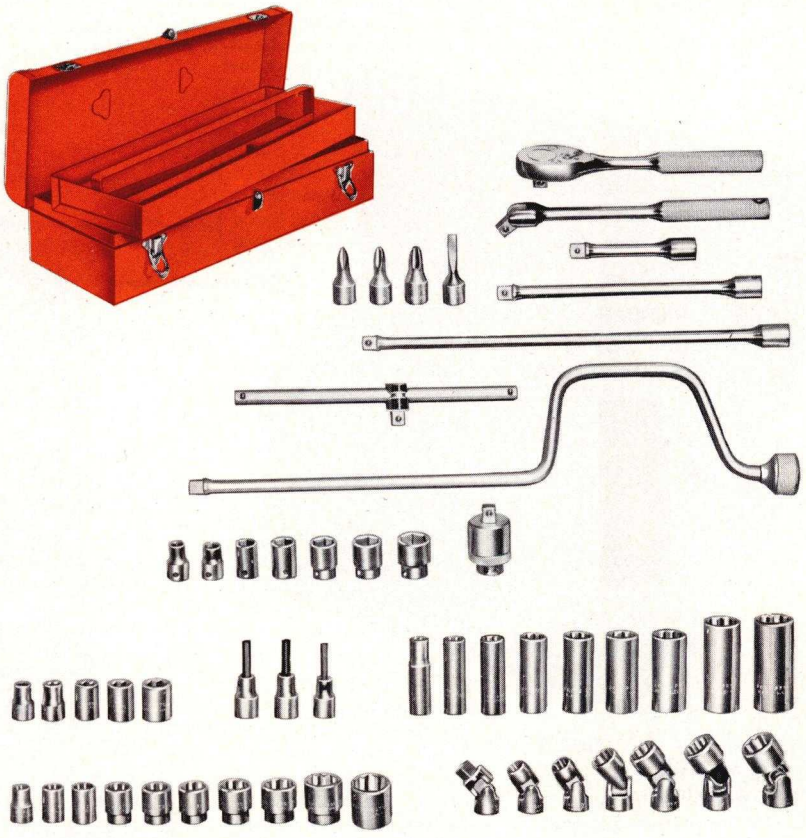
NO. 4700-D SET
1/4" SQUARE DRIVE 33-PC. MASTER SOCKET WRENCH SET

A utility set for auto, aircraft and all repair and assembly work where tiny socket wrenches are necessary.

CONTENTS/NO. 4700-D SET

NO.	DESCRIPTION
4706	Regular Socket, 6-point, 7/32" opening
4707	Regular Socket, 6-point, 3/16" opening
4708	Regular Socket, 6-point, 1/4" opening
4709	Regular Socket, 6-point, 9/32" opening
4710	Regular Socket, 6-point, 5/16" opening
4711	Regular Socket, 6-point, 11/32" opening
4712	Regular Socket, 6-point, 3/8" opening
4714	Regular Socket, 6-point, 7/16" opening
4708L	Deep Socket, 6-point, 1/4" opening
4709L	Deep Socket, 6-point, 9/32" opening
4710L	Deep Socket, 6-point, 5/16" opening
4711L	Deep Socket, 6-point, 11/32" opening
4712L	Deep Socket, 6-point, 3/8" opening
4714L	Deep Socket, 6-point, 7/16" opening
4708S	Regular Socket, 8-point, 1/4" opening
4710S	Regular Socket, 8-point, 5/16" opening
4712S	Regular Socket, 8-point, 3/8" opening
4716T	Regular Socket, 12-point, 1/2" opening
4737	Phillips Socket Screw Driver, #1
4738	Phillips Socket Screw Driver, #2
4743	Socket Screw Driver, 3/8" tip
4744	Socket Screw Driver, 3/16" tip
4745	Socket Screw Driver, 1/4" tip
4747	Ratchetor
4749	Ratchet
4759	Extension, 2"
4760	Extension, 4"
4761	Extension, 6"
4765	Flexible Extension, 6"
4766	Hinge Handle
4769	Plastic Handle
4770	Universal Joint
4785	Sliding Bar
4796	Metal Box

Weight of Set, 3.10 lbs.



NO. 5200G — 3/8" SQUARE DRIVE 54 PC. GENERAL SET

A complete set selected to handle all general requirements, with box and tote tray designed for these tools.

CONTENTS/NO. 5200-G SET

NO.	DESCRIPTION
4990-3/16	Hollow Head Socket, 3/16" bit
4990-7/32	Hollow Head Socket, 7/32" bit
4990-1/4	Hollow Head Socket, 1/4" bit
5012	Deep Socket, 12-point, 3/8" opening
5014	Deep Socket, 12-point, 7/16" opening
5016	Deep Socket, 12-point, 1/2" opening
5018	Deep Socket, 12-point, 9/16" opening
5020	Deep Socket, 12-point, 5/8" opening
5022	Deep Socket, 12-point, 11/16" opening
5024	Deep Socket, 12-point, 3/4" opening
5026	Deep Socket, 12-point, 13/16" opening
5028	Deep Socket, 12-point, 7/8" opening
5212	Regular Socket, 12-point, 3/8" opening
5214	Regular Socket, 12-point, 7/16" opening
5216	Regular Socket, 12-point, 1/2" opening
5218	Regular Socket, 12-point, 9/16" opening
5219	Regular Socket, 12-point, 19/32" opening
5220	Regular Socket, 12-point, 5/8" opening
5222	Regular Socket, 12-point, 11/16" opening
5224	Regular Socket, 12-point, 3/4" opening
5226	Regular Socket, 12-point, 13/16" opening
5228	Regular Socket, 12-point, 7/8" opening
5210H	Regular Socket, 6-point, 5/16" opening
5212H	Regular Socket, 6-point, 3/8" opening
5214H	Regular Socket, 6-point, 7/16" opening
5216H	Regular Socket, 6-point, 1/2" opening
5218H	Regular Socket, 6-point, 9/16" opening

NO.	DESCRIPTION
5220H	Regular Socket, 6-point, 5/8" opening
5222H	Regular Socket, 6-point, 11/16" opening
5208S	Regular Socket, 8-point, 1/4" opening
5210S	Regular Socket, 8-point, 5/16" opening
5212S	Regular Socket, 8-point, 3/8" opening
5214S	Regular Socket, 8-point, 7/16" opening
5216S	Regular Socket, 8-point, 1/2" opening
5241	Phillips Socket Screw Driver, #2
5242	Phillips Socket Screw Driver, #3
5243	Phillips Socket Screw Driver, #4
5246	Socket Screw Driver, 1/4" x .030" tip
5247	Ratchet Adapter
5249	Ratchet
5260	Extension, 3 1/2"
5261	Extension, 7 1/2"
5262	Extension, 12"
5265	Hinge Handle
5270	Universal Joint
5273	Universal Socket, 12-point, 3/8" opening
5274	Universal Socket, 12-point, 7/16" opening
5275	Universal Socket, 12-point, 1/2" opening
5276	Universal Socket, 12-point, 9/16" opening
5277	Universal Socket, 12-point, 5/8" opening
5278	Universal Socket, 12-point, 11/16" opening
5279	Universal Socket, 12-point, 3/4" opening
5280	Speed Handle
5285	Sliding Bar
5296	Metal Box (10.0 lbs.)

Weight of Set, 16.80 lbs.

MASTER SOCKET WRENCH SETS

IMPORTANT
SAFETY RULES FOR HAND TOOL USE

Hand tools, although commonly used, are specialized for particular jobs. Always use the right size and type of tool for the job being done. Keep tools in proper working condition.

"Mushroomed" heads of chisels and punches may chip and cause injury.

Screwdriver blades are made to turn screws; they should never be used for other purposes. Worn blades may slip and cause injury.

Only power drive sockets should be used on pneumatic or electric impact wrenches.

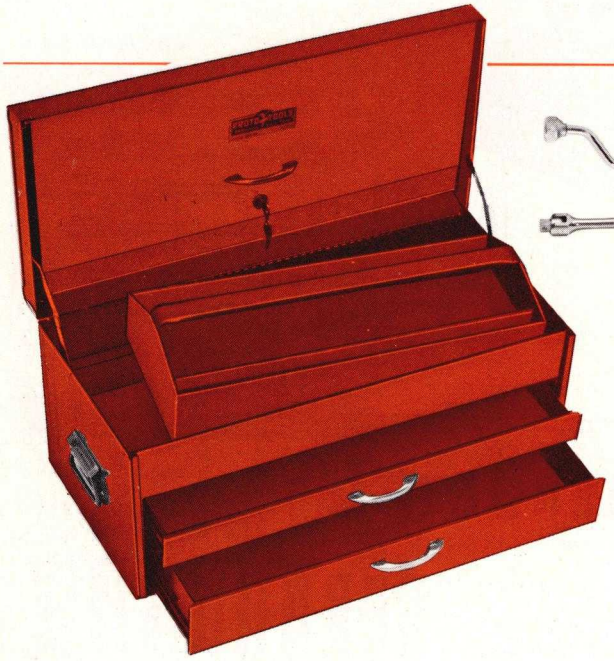
All wrenches are designed to a specific size-length-strength ratio. The use of a "cheater" or any other means for increased leverage is hazardous.

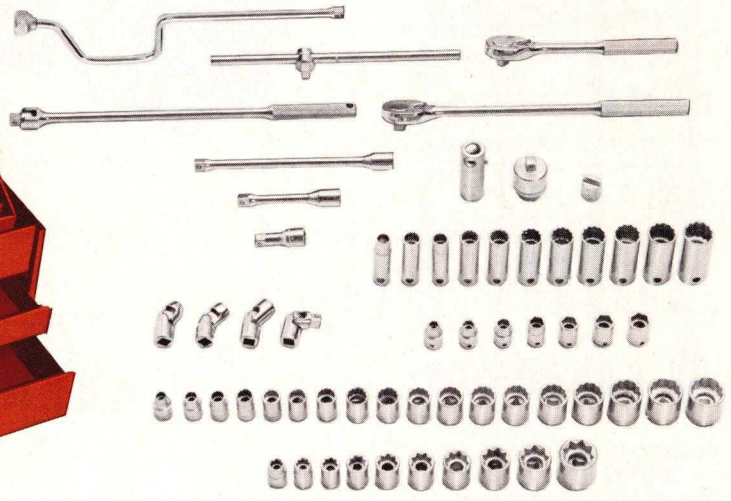
Keep hammer heads tightened on handle. Do not strike one hammer with another hammer.

Eye protection, through use of safety glasses or hood, is recommended for any job involving the use of tools; particularly when using punches, chisels and drills.

Use hand tools only for their designed purposes and within their size range.

Proto Tool Company cannot be responsible for injury or damage caused by tools improperly used; or from tools which have been abused or badly worn.





NO. 5400-E — ½" SQUARE DRIVE 61 PC. MASTER SET

*(5400-D WITHOUT METAL BOX)

The set for the professional mechanic who needs complete coverage for every nut-turning job. Contains every size and type ½" socket, plus a wide range of attachments to speed any job.

CONTENTS/NO. 5400-E SET

NO.	DESCRIPTION	SET 5400-E *5400-D
4515	Stud Remover	1
5316	Deep Socket, 12-point, ½" opening	1
5318	Deep Socket, 12-point, 9/16" opening	1
5320	Deep Socket, 12-point, 5/8" opening	1
5322	Deep Socket, 12-point, 11/16" opening	1
5324	Deep Socket, 12-point, 3/4" opening	1
5326	Deep Socket, 12-point, 13/16" opening	1
5328	Deep Socket, 12-point, 7/8" opening	1
5330	Deep Socket, 12-point, 15/16" opening	1
5332	Deep Socket, 12-point, 1" opening	1
5334	Deep Socket, 12-point, 1 1/16" opening	1
5336	Deep Socket, 12-point, 1 1/8" opening	1
5412	Regular Socket, 12-point, 3/8" opening	1
5414	Regular Socket, 12-point, 7/16" opening	1
5416	Regular Socket, 12-point, ½" opening	1
5418	Regular Socket, 12-point, 9/16" opening	1
5419	Regular Socket, 12-point, 19/32" opening	1
5420	Regular Socket, 12-point, 5/8" opening	1
5422	Regular Socket, 12-point, 11/16" opening	1
5424	Regular Socket, 12-point, 3/4" opening	1
5425	Regular Socket, 12-point, 25/32" opening	1
5426	Regular Socket, 12-point, 13/16" opening	1
5428	Regular Socket, 12-point, 7/8" opening	1
5429	Regular Socket, 12-point, 29/32" opening	1
5430	Regular Socket, 12-point, 15/16" opening	1
5432	Regular Socket, 12-point, 1" opening	1
5434	Regular Socket, 12-point, 1 1/16" opening	1
5436	Regular Socket, 12-point, 1 1/8" opening	1
5438	Regular Socket, 12-point, 1 3/16" opening	1
5440	Regular Socket, 12-point, 1 1/4" opening	1
5412H	Regular Socket, 6-point, 3/8" opening	1
5414H	Regular Socket, 6-point, 7/16" opening	1
5416H	Regular Socket, 6-point, ½" opening	1
5418H	Regular Socket, 6-point, 9/16" opening	1
5420H	Regular Socket, 6-point, 5/8" opening	1
5422H	Regular Socket, 6-point, 11/16" opening	1
5424H	Regular Socket, 6-point, 3/4" opening	1
5412S	Regular Socket, 8-point, 3/8" opening	1
5414S	Regular Socket, 8-point, 7/16" opening	1
5416S	Regular Socket, 8-point, ½" opening	1
5418S	Regular Socket, 8-point, 9/16" opening	1
5420S	Regular Socket, 8-point, 5/8" opening	1
5422S	Regular Socket, 8-point, 11/16" opening	1
5424S	Regular Socket, 8-point, 3/4" opening	1
5426S	Regular Socket, 8-point, 13/16" opening	1
5428S	Regular Socket, 8-point, 7/8" opening	1
5432S	Regular Socket, 8-point, 1" opening	1
5446	Screw Driver Socket, 15/16" x .150"	1
5447	Ratchet Adapter	1
5449	Ratchet, 10"	1
5450	Ratchet, 15"	1
5460	Extension, 2½"	1
5461	Extension, 5"	1
5463	Extension, 10"	1
5468	Hinge Handle	1
5470	Universal Joint	1
5475	Universal Socket, 12-point, ½" opening	1
5476	Universal Socket, 12-point, 9/16" opening	1
5477	Universal Socket, 12-point, 5/8" opening	1
5480	Speed Handle	1
5485	Sliding Handle	1
9991	Metal Box	1

Metal boxes available separately, see page 109

Weight of Set 5400-D*	26.20 lbs.
Weight of Box 9991	34.00 lbs.
Weight of Set 5400-E	60.20 lbs.

Weight of Set, 261 Lbs.

NO. 9905 SET CHOSEN AS THE OFFICIAL TOOLS OF THE INDY "500"

Proto annually sells thousands of tools to the world's top professional auto mechanics through its tool store at the Indianapolis Speedway. Each year a set of tools selected to meet the special needs of these mechanics is awarded to the winning mechanic and to the winning driver. This same set, the Indy "500" special, is now a standard item in the Proto line as No. 9905. The finest set of automotive tools ever assembled, it meets the highest demands for efficiency, high quality, appearance and durability.

CONTENTS/NO. 9905 SET

4700B 1/4" DRIVE SOCKET SET
Ratchet
Plastic Handle
Sliding Bar Handle
9 Sockets
7—6 pt. ranging from 7/32" to 7/16" op.
2—8 pt. ranging from 1/4" to 5/16" op.
Steel Box 6 1/3" x 2 1/4" x 1"

5200AA 3/8" DRIVE SOCKET SET

5400AA 1/2" DRIVE SOCKET SET
10—12 pt. sockets, ranging from 7/16" to 1"
Reversible Ratchet
5" Extension
10" Extension
Hinge Handle
Universal Joint
Speed Handle 16 7/8" long

1200F COMBINATION WRENCH SET
15 wrenches, ranging from 5/16" to 1 1/4" in vinyl kit

3000H OPEN END WRENCH SET
10 wrenches, ranging from 1/4" to 1 1/8" in vinyl kit

3200C IGNITION WRENCH SET
Ignition gauge set
Plier
Point File 5"
Screw Driver
Screw Starter
8 wrenches, ranging from 13/64" to 11/32"
All in vinyl kit

000-A FEELER GAUGE SET (STANDARD)
9 short blades—.003 to .018 in
000C holder

5000A 3/8" DRIVE DEEP SOCKET SET
9—12 pt. sockets, ranging from 3/8" to 7/8" op.
Metal tray

5300A 1/2" DRIVE DEEP SOCKET SET
11 sockets, ranging from 1/2" to 1 1/8" op.
Metal tray

9500A SCREW EXTRACTOR SET
5 sizes of extractors in vinyl plastic kit

9600A PHILLIPS SCREWDRIVER SET
6 screwdrivers (plastic handle) in kit

9800A STANDARD SCREW DRIVER SET
6 screwdrivers (plastic handles) in kit

NO. 2 PUNCH AND CHISEL SET
7 Punches, includes: Center, Pin and Starting punches
5 Chisels, includes: Cape, Diamond Point and Cold chisels in red vinyl kit

4900A HOLLOW HEAD SOCKET SET
10 Hollow Head sockets
7—3/8" drive for screws 1/8"-3/8"
3—1/2" drive for screws 1/2", 9/16" & 5/8"

6006 3/8 Torque Wrench
6016 1/2 dr. Torque Wrench
209-G Side Cutters
202 Thin Nose Pliers
226-G Needle Nose Pliers
218-G Battery Pliers
227-G Duck Pliers
243 Pliers
234 Pliers
291-R Pliers
275 5" Pliers
276 6" Pliers
299 Wire Strippers
389 Truarc Pliers
391 Truarc Pliers
392 Truarc Pliers
393 Truarc Pliers
708-L Clik Stop Adjust. Wrench 8"
712-L Clik Stop Adjust. Wrench 12"
1304-P Hammer, Ball Pein
1312-P Hammer, Ball Pein
1316-P Hammer, Ball Pein
1431 Brass Hammer
1384 Shot Loaded Hammer
2336 Gasket Scraper
9997 Master Tool Chest
9967 Roll Cab (See page 108)

PROTO
OFFICIAL TOOLS
INDIANAPOLIS "500"

SAM HANKS, INDY "500" CHAMPION AND PROTO RACING CONSULTANT

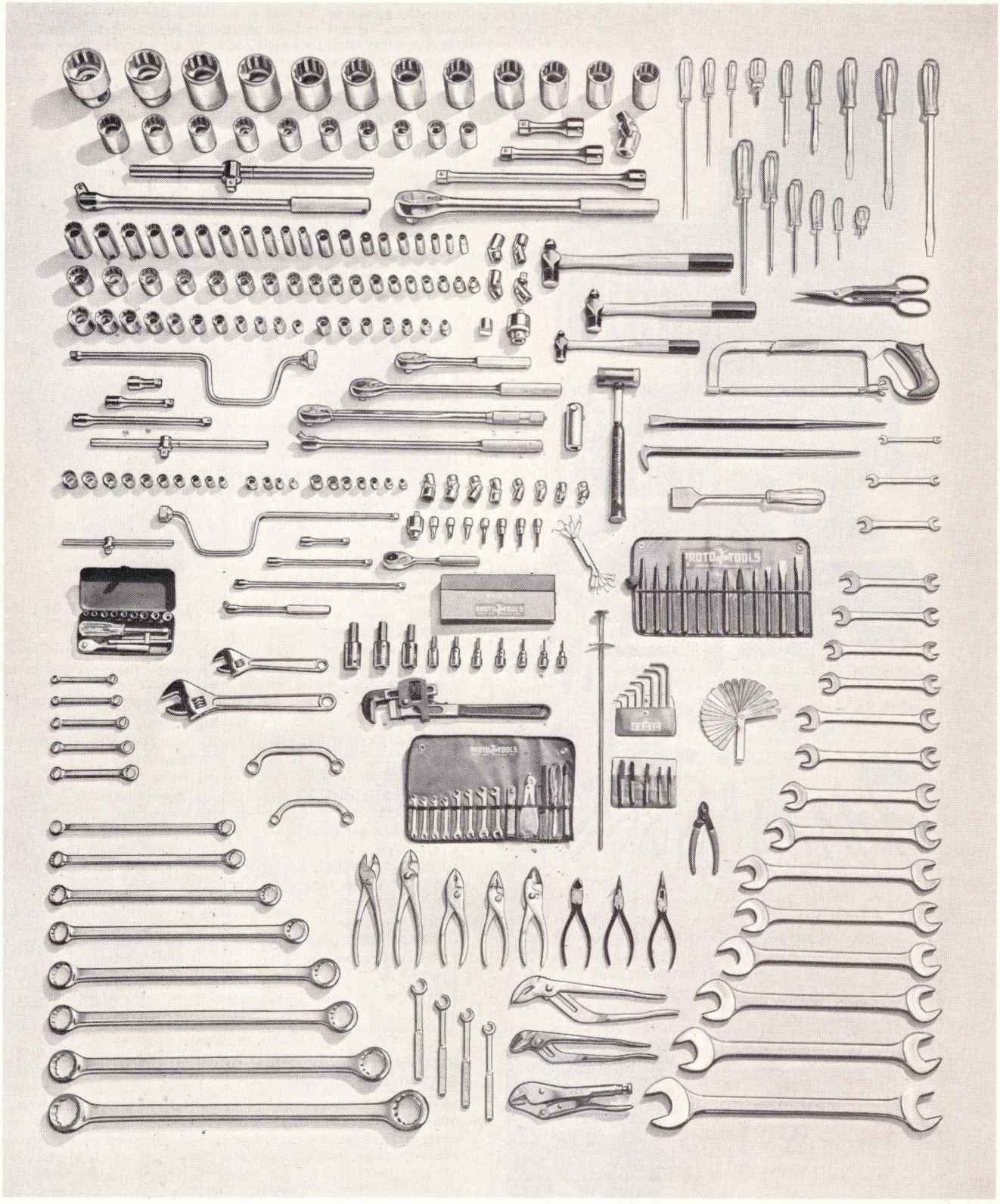
Indy "500" mechanics can get the same fine tools you can get at Proto's unique Speedway Store right at the Indianapolis "500" Raceway.

Among professionals, the mechanics are often considered the real heroes among the racing fraternity. That's why "500" participation is an honor for any good mechanic . . . and why Proto Tools are honored to be the official "500" choice of the mechanics themselves.

"Proto . . . tools that the professionals use"

MASTER SOCKET WRENCH SETS

NO. 9902-A MASTER MAINTENANCE SET
WITH TOOLMOBILE



MASTER SOCKET WRENCH SETS

NO. 9902-A MASTER MAINTENANCE SET WITH TOOLMOBILE

Proto custom-balanced this complete set of 282 tools to fill the job requirements of all types of factory, utility, railroad, refinery and other industrial maintenance. The selection is perfect for mechanics who repair automobiles, trucks, buses, aircraft, tractors, farm implements and construction equipment. Toolmobile cabinets are job-designed for orderly, secure storage of a complete set of tools and easy moving of tools to the job. Interchangeable drawers and partitions enable you to arrange many combinations to suit your own convenience. This set includes all the tools listed below plus No. 9968 Toolmobile Cabinet, 9968-1 Drawer and Runners, 9968-2 Drawer and Runners, 9968-6 Door for bottom section. (See descriptions on page 105.)

Weight, 282 Tools and Toolmobile, 307 Lbs.

Single-Lock Drop-front Closes Entire Cabinet

CONTENTS/NO. 9902-A

NO.	DESCRIPTION	PAGE
000A	Standard Gauge Set	3
000K	Spark Plug Gauge Set	3
2	Punch and Chisel Set, 12"	6
202	Thin Jaw Plier, 6½"	7
203	Bent Nose Plier, 6¾"	7
206	Diagonal Plier, 6"	7
225	Curved Needle Nose Plier, 6"	9
226	Needle Nose Plier, 6¾"	9
243	Power-Track Plier, 10"	10
246	Combination Side Cutting Plier, 6"	10
248P	Pipe Jaw Plier, 11¼"	10
252	Hose Clamp Plier, 8¼"	10
278	Slip Joint Plier, 8"	11
291	Lever Wrench Plier, 8"	11
299	Wire Stripper Plier, 5"	14
310	Duck Bill Snip, 10"	16
352	Adjustable Hacksaw	16
708L	Adjustable Wrench, 8"	17
712L	Adjustable Wrench, 12"	17
814	Pipe Wrench, 14"	18
1122	Box Wrench, ⅜" x 7/16"	19
1125	Box Wrench, 7/16" x ½"	19
1126	Box Wrench, ½" x 9/16"	19
1130	Box Wrench, 9/16" x ⅝"	19
1131	Box Wrench, ⅝" x ¾"	19
1137	Box Wrench, 11/16" x 25/32"	19
1139	Box Wrench, ¾" x 7/8"	19
1145	Box Wrench, 15/16" x 1"	19
1150	Box Wrench, 1 1/16" x 1⅛"	19
1155	Box Wrench, 1¼" x 1 5/16"	19
1160	Box Wrench, 1¼" x 1⅜"	19
1162	Box Wrench, 1 7/16" x 1½"	19
1164	Box Wrench, 1⅝" x 1 11/16"	19
1304P	Ball Pein Hammer, 4 ounce	30
1312P	Ball Pein Hammer, 12 ounce	30
1316P	Ball Pein Hammer, 16 ounce	30
1362	Plastic Tip Hammer, 16 ounce	30
1725	Obstruction Wrench	22
1730	Obstruction Wrench	22
2120	Pry Bar, 18"	32
2126	Pry Bar, Roll Head, 16"	32
2336	Gasket Scraper	44
2344	Grab All, 17½"	45
3018	Open End Wrench, ¼" x 5/16"	23
3020	Open End Wrench, 5/16" x ⅜"	23
3021	Open End Wrench, ⅜" x 7/16"	23
3025	Open End Wrench, 7/16" x ½"	23
3026	Open End Wrench, ½" x 9/16"	23
3030	Open End Wrench, 9/16" x ⅝"	23
3031	Open End Wrench, ⅝" x ¾"	23
3033	Open End Wrench, 19/32" x 11/16"	23
3034	Open End Wrench, ⅝" x 11/16"	23
3035	Open End Wrench, 1 1/16" x ¾"	23
3039	Open End Wrench, ¾" x ⅞"	23
3045	Open End Wrench, 15/16" x 1"	23
3050	Open End Wrench, 1 1/16" x 1⅛"	23
3051	Open End Wrench, 1 1/16" x 1¼"	23
3055	Open End Wrench, 1¼" x 1 5/16"	23
3060	Open End Wrench, 1⅜" x 1 7/16"	23
3070	Open End Wrench, 1½" x 1⅝"	23
3200C	Ignition Wrench Set, 13 piece	25
3714	Flare Nut Wrench	25
3716	Flare Nut Wrench	25
3718	Flare Nut Wrench	25
3720	Flare Nut Wrench	25
4515	Stud Remover	39
4700B	Drive Socket Set, ¼", 12 piece	51
4977	Hex Wrench Set, 7 piece	45
4900A	Hex Wrench Socket Set, 10 piece	78
4990 3/16	Bit Hollow Head Screw Sockets	53
4990 7/32	Bit Hollow Head Screw Sockets	53
4990 ¼	Bit Hollow Head Screw Sockets	53
5200G	General Socket Set, ⅜" drive (tools only, 54 pieces)	77
5400D	Master Socket Set, ½" drive (tools only, 61 pieces)	78
5500A	Heavy Duty Socket Set, ¾" square drive (tools only, 29 pieces)	59
6016	Torque Wrench, ½" drive, ratchet hd.	61
9500A	Screw Extractors, 5 piece	6
9624	Screwdriver, Cabinet, ⅛" x 4"	74
9634	Screwdriver, Cabinet, 3/16" x 6"	74
9636	Screwdriver, Cabinet, ¼" x 10"	74
9652	Screwdriver, ¼" x 1½" blade	75
9671	Phillips Screwdriver, #2 point stubby	75
9680	Phillips Screwdriver, #0 point	75
9682	Phillips Screwdriver, #1 point	75
9684	Phillips Screwdriver, #2 point	75
9686	Phillips Screwdriver, #3 point	75
9688	Phillips Screwdriver, #4 point	75
9804	Screwdriver, ¼" x 4" blade	74
9806	Screwdriver, 5/16" x 6" blade	74
9808	Screwdriver, ⅜" x 8" blade	74
9812	Screwdriver, ⅜" x 12" blade	74
9832	Screwdriver, 3/16" x 4" blade	74
9968	Toolmobile Cabinet	101
9968-1	Toolmobile Drawer	101
9968-2	Toolmobile Drawer	101
9968-6	Toolmobile Door for bottom section	101

NO. 9901-A MAINTENANCE MASTER SET TOOLS ONLY. NO TOOLMOBILE

This set includes all the tools in Set. No. 9902-A listed above, minus Toolmobile Cabinet No. 9968, 9968-1, 9968-2 and 9968-6.

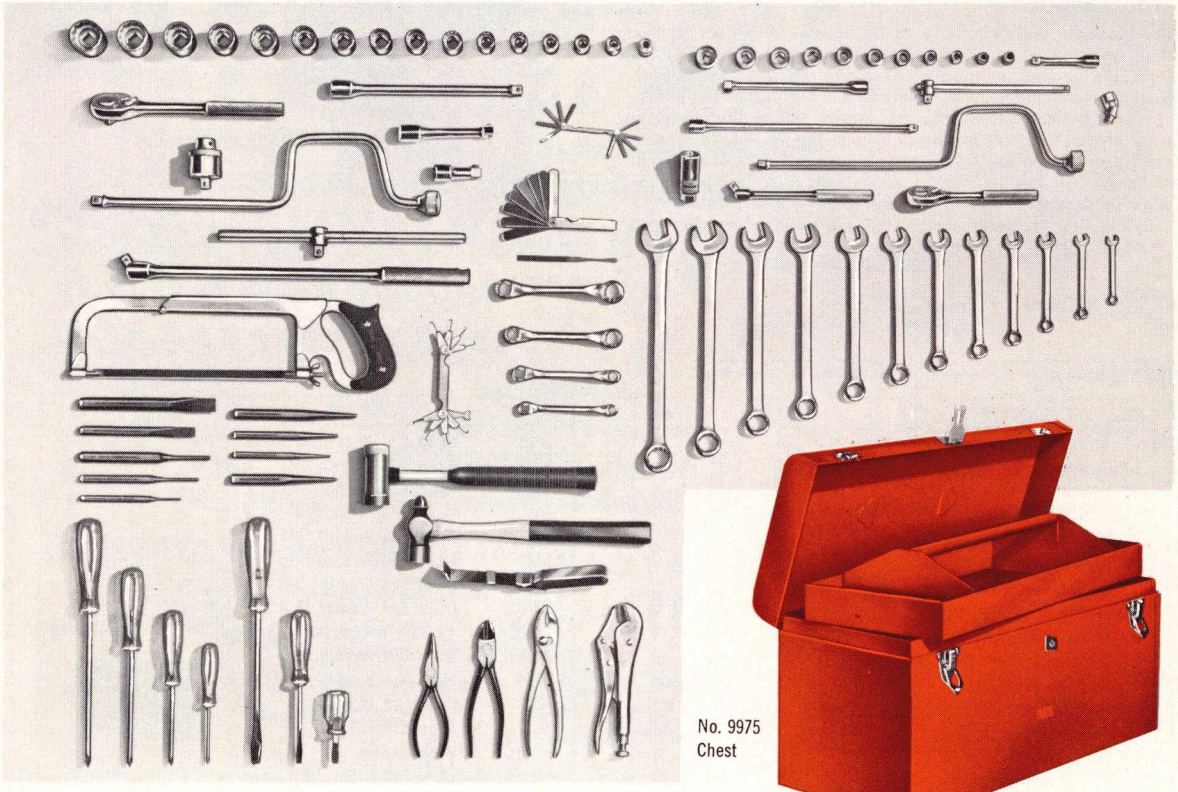
Weight, tools only, 158.00 pounds.

MASTER SOCKET WRENCH SETS

PROTO PROFESSIONAL TOOLS

NO. 9912 BASIC TOOL SET

This popular Proto set includes 88 most needed tools for the mechanic's everyday service and repair requirements. It is an ideal basic starting set to which other tools may be added as needs arise.



No. 9975 Chest

CONTENTS/NO. 9912 SET

NO.	DESCRIPTION	PAGE
000 A	Feeler Gauge Set	3
000 D	Ignition Gauge Set	3
000 K	Spark Plug Gauge Set	3
41½	Center Punch, ½" x 5⅝"	5
47 5/16 x 1/8	Pin Punch, ⅛" x 5¼"	5
47 3/8 x 3/16	Pin Punch, 3/16" x 6⅛"	5
47½ x ¼	Pin Punch, ¼" x 6¾"	5
50 5/16	Starting Punch, ⅛" x 5 5/32"	5
50 3/8	Starting Punch, 3/16" x 5 21/32"	5
50½	Starting Punch, ¼" x 6½"	5
86 A 7/16	Cold Chisel, ½" x 6 3/16"	5
86 A ⅝	Cold Chisel, ¾" x 7 3/16"	5
207	Diagonal Cutting Plier, 7"	7
220	Chain Nose Plier, 6¾"	8
278	Slip Joint Plier, 8"	11
291	Lever Wrench Plier	11
352	Hacksaw	16
1210	Comb. Wrench, 12 pt. 5/16"	20
1212	Comb. Wrench, 12 pt. 3/8"	20
1214	Comb. Wrench, 12 pt. 7/16"	20
1216	Comb. Wrench, 12 pt. ½"	20
1218	Comb. Wrench, 12 pt. 9/16"	20
1220	Comb. Wrench, 12 pt. ⅝"	20
1222	Comb. Wrench, 12 pt. 11/16"	20
1224	Comb. Wrench, 12 pt. ¾"	20
1226	Comb. Wrench, 12 pt. 13/16"	20
1228	Comb. Wrench, 12 pt. 7/8"	20
1230	Comb. Wrench, 12 pt. 15/16"	20
1232	Comb. Wrench, 12 pt. 1"	20
1312 P	Ball Pein Hammer, 12 ounce	30
1362	Plastic Tip Hammer, 16 ounce	30
2302	Ignition Point File, 5"	48

NO.	DESCRIPTION	PAGE
2337	Carbon Scraper	44
5026 HPA	Spark Plug Socket	45
5210 H	Reg. Socket, 6 pt. 5/16"	52
5212	Reg. Socket, 12 pt. 3/8"	51
5214	Reg. Socket, 12 pt. 7/16"	51
5216	Reg. Socket, 12 pt. ½"	51
5218	Reg. Socket, 12 pt. 9/16"	51
5219	Reg. Socket, 12 pt. 19/32"	51
5220	Reg. Socket, 12 pt. ⅝"	51
5222	Reg. Socket, 12 pt. 11/16"	51
5224	Reg. Socket, 12 pt. ¾"	51
5226	Reg. Socket, 12 pt. 13/16"	51
5228	Reg. Socket, 12 pt. 7/8"	51
5249	Ratchet, 3/8" square drive	53
5260	Extension Bar, 3½"	54
5261	Extension Bar, 7½"	54
5262	Extension Bar, 12"	54
5265	Hinge Handle	53
5270	Universal Joint	54
5280	Speed Handle	54
5285	Sliding Bar	54
5414	Reg. Socket, 12 pt. 7/16"	55
5416	Reg. Socket, 12 pt. ½"	55
5418	Reg. Socket, 12 pt. 9/16"	55
5419	Reg. Socket, 12 pt. 19/32"	55
5420	Reg. Socket, 12 pt. ⅝"	55
5422	Reg. Socket, 12 pt. 11/16"	55
5424	Reg. Socket, 12 pt. ¾"	55
5425	Reg. Socket, 12 pt. 25/32"	55
5426	Reg. Socket, 12 pt. 13/16"	55
5428	Reg. Socket, 12 pt. 7/8"	55
5430	Reg. Socket, 12 pt. 15/16"	55

NO.	DESCRIPTION	PAGE
5432	Reg. Socket, 12 pt. 1"	55
5434	Reg. Socket, 12 pt. 1 1/16"	55
5436	Reg. Socket, 12 pt. 1⅛"	55
5438	Reg. Socket, 12 pt. 1 3/16"	55
5440	Reg. Socket, 12 pt. 1¼"	55
5447	Ratchet Adapter	56
5449	Ratchet, ½" square drive	56
5460	Extension Bar, 2½"	56
5461	Extension Bar, 5"	56
5463	Extension Bar, 10"	56
5468	Hinge Handle	56
5480	Speed Handle	56
5485	Sliding Handle	56
8160	Box Wrch., 12 pt. 3/8" x 7/16"	22
8161	Box Wrch., 12 pt. ½" x 9/16"	22
8162	Box Wrch., 12 pt. ⅝" x 11/16"	22
8163	Box Wrch., 12 pt. ¾" x 13/16"	22
9604	Screwdriver, ¼" x 4"	74
9608	Screwdriver, 3/8" x 8"	74
9652	Screwdriver, ¼" x 1½"	75
9682	Phillips Screwdriver, #1	75
9684	Phillips Screwdriver, #2	75
9686	Phillips Screwdriver, #3	75
9688	Phillips Screwdriver, #4	75
9975	Metal Chest	105

Set No. 9912, Tools and Chest. Wt. 43.00 Lbs.

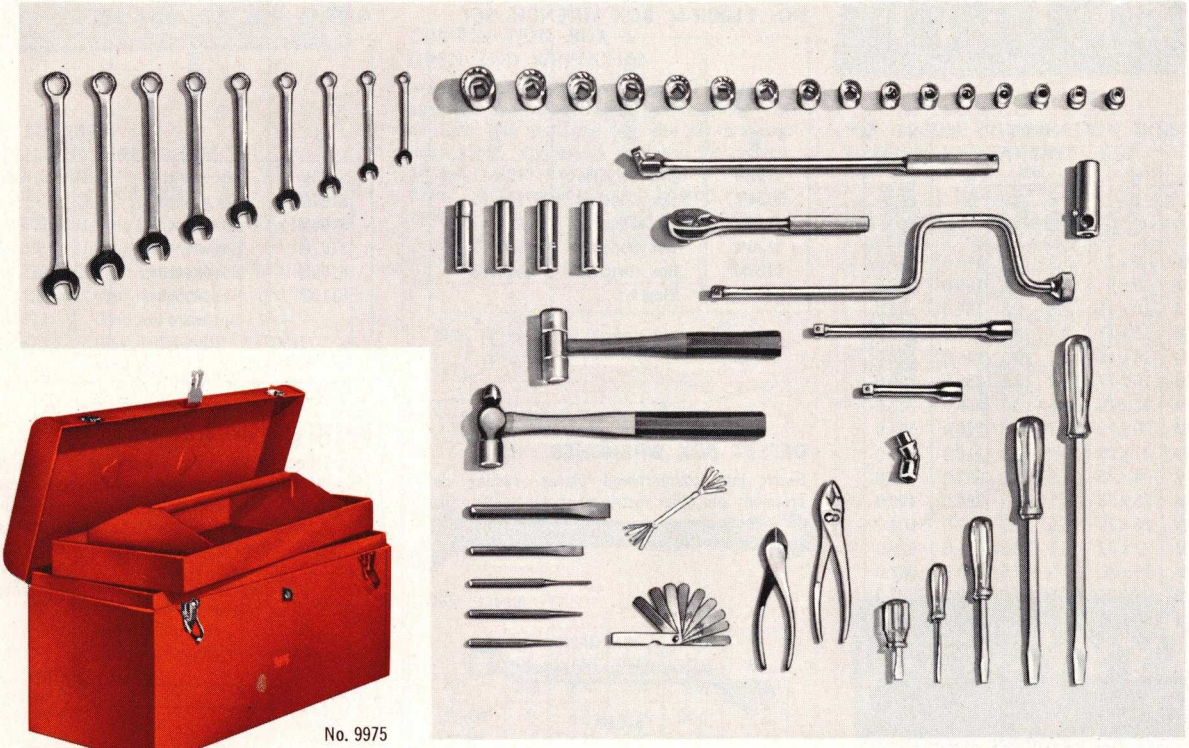
NO. 9911 SET

Tools in set 9912 minus Chest No. 9975. Weight 32.00 Lbs.

NO. 9914 APPRENTICE TOOL SET

Here are 52 basic tools that enable you to do most service work efficiently, with a low initial investment in fine quality Proto tools.

Additional tools can be added until you have a complete mechanic's set.



No. 9975
Chest

NO.	DESCRIPTION	PAGE
000 A	Feeler Gauge Set	3
000 D	Ignition Gauge Set	3
41 3/8	Center Punch, 3/8" x 4 29/32"	5
47 3/8 x 3/16	Pin Punch, 3/16" x 6 1/8"	5
50 3/8	Starting Punch, 3/16" x 5 21/32"	5
86 A 3/8	Cold Chisel, 7/16" x 5 5/8"	5
86 A 5/8	Cold Chisel, 3/4" x 7 3/16"	5
209	Diagonal Cutting Plier, 7"	7
278	Slip Joint Plier, 8"	11
1212	Comb. Wrench, 12 pt. 3/8"	20
1214	Comb. Wrench, 12 pt. 7/16"	20
1216	Comb. Wrench, 12 pt. 1/2"	20
1218	Comb. Wrench, 12 pt. 9/16"	20
1220	Comb. Wrench, 12 pt. 5/8"	20
1222	Comb. Wrench, 12 pt. 11/16"	20
1224	Comb. Wrench, 12 pt. 3/4"	20
1226	Comb. Wrench, 12 pt. 13/16"	20
1228	Comb. Wrench, 12 pt. 7/8"	20
1316 P	Ball Pein Hammer, 16 ounce	30
1383	Plastic Tip Hammer, 12 ounce	30

NO.	DESCRIPTION	PAGE
4515	Stud Remover	39
5320	Deep Socket, 12 pt. 5/8"	55
5322	Deep Socket, 12 pt. 11/16"	55
5324	Deep Socket, 12 pt. 3/4"	55
5326	Deep Socket, 12 pt. 13/16"	55
5412	Reg. Socket, 12 pt. 3/8"	55
5414	Reg. Socket, 12 pt. 7/16"	55
5416	Reg. Socket, 12 pt. 1/2"	55
5418	Reg. Socket, 12 pt. 9/16"	55
5419	Reg. Socket, 12 pt. 19/32"	55
5420	Reg. Socket, 12 pt. 5/8"	55
5422	Reg. Socket, 12 pt. 11/16"	55
5424	Reg. Socket, 12 pt. 3/4"	55
5425	Reg. Socket, 12 pt. 25/32"	55
5426	Reg. Socket, 12 pt. 13/16"	55
5428	Reg. Socket, 12 pt. 7/8"	55
5430	Reg. Socket, 12 pt. 15/16"	55
5432	Reg. Socket, 12 pt. 1"	55
5434	Reg. Socket, 12 pt. 1 1/16"	55
5436	Reg. Socket, 12 pt. 1 1/8"	55

NO.	DESCRIPTION	PAGE
5440	Reg. Socket, 12 pt. 1 1/4"	55
5449	Ratchet, 1/2" square drive	56
5461	Extension Bar, 5"	56
5463	Extension Bar, 10"	56
5468	Hinge Handle	56
5470	Universal Joint	56
5480	Speed Handle	56
9623	Screwdriver, 1/8" x 3"	74
9652	Screwdriver, 1/4" x 1 1/2"	75
9804	Screwdriver, 1/4" x 4"	74
9808	Screwdriver, 3/8" x 8"	74
9812	Screwdriver, 3/8" x 12"	74
9975	Metal Chest	105

Set No. 9914, tools and chest. Wt. 34.00 Lbs.

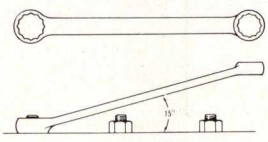
NO. 9913 SET

Tools in Set 9914 minus Chest No. 9975. Weight 23.00 Lbs.

PROTO PROfessional TOols

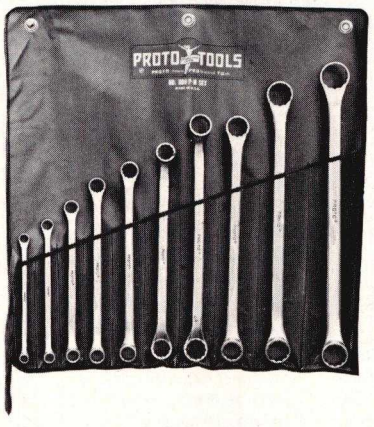
BOX WRENCHES/12-POINT

Thin, very strong box walls and compact heads for use in close quarters. Heads offset 15°. Box openings beveled for easy placement over nut. Streamlined shanks provide comfortable grip and reduce weight. Forged alloy steel. Chrome plated.



NO.	OPENING MM	HEAD THICKNESS MM SMALL HEAD	HEAD THICKNESS MM LARGE HEAD	LENGTH MM	WEIGHT GRAMS
*1120M	6 x 7	5.9 - 6.7		149.0	27.0
1121M	8 x 9	6.7 - 7.6		165.0	36.0
1122M	10 x 11	7.6 - 9.3		184.0	86.0
1123M	12 x 13	8.7 - 9.1		210.0	113.0
1124M	14 x 15	9.1 - 10.3		240.0	108.0
1125M	16 x 17	10.3 - 11.5		259.0	200.0
1126M	18 x 19	11.5 - 12.3		276.0	227.0
1127M	20 x 22	13.1 - 13.5		316.0	304.0
1128M	21 x 23	13.1 - 13.5		316.0	304.0
1129M	24 x 26	14.3 - 15.1		362.0	399.0
1130M	25 x 28	15.1 - 16.3		384.0	490.0
1131M	26 x 29	15.5 - 16.3		413.0	504.0
1132M	27 x 32	15.5 - 17.5		445.0	626.0
1133M	30 x 32	17.0 - 17.5		479.0	662.0
1134M	32 x 36	17.5 - 19.8		513.0	907.0
1135M	36 x 41	19.8 - 23.0		553.0	1043.0

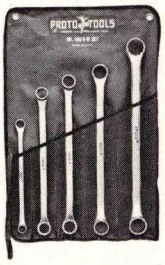
*6-Pt.



NO. 1100P-M BOX WRENCH SET

NO.	DESCRIPTION	SIZE
1121M	Box wrenches	8 x 9 mm
1122M	Box wrenches	10 x 11
1123M	Box wrenches	12 x 13
1124M	Box wrenches	14 x 15
1125M	Box wrenches	16 x 17
1126M	Box wrenches	18 x 19
1127M	Box wrenches	20 x 22
1128M	Box wrenches	21 x 23
1129M	Box wrenches	24 x 26
1130M	Box wrenches	25 x 28
2418M	Vinyl kit	

See page 19 for Standard sizes.

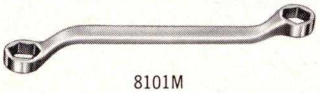


NO. 1100R-M BOX WRENCH SET

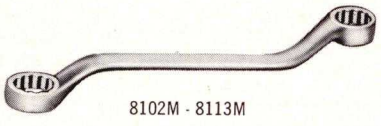
NO.	DESCRIPTION	SIZE
1122M	Box wrenches	10 x 11 mm
1124M	Box wrenches	14 x 15
1125M	Box wrenches	16 x 17
1126M	Box wrenches	18 x 19
1128M	Box wrenches	21 x 23
2405M	Vinyl kit	

OFFSET BOX WRENCHES

Reach into counterbored places, casting depressions and other restricted spots. Heads offset 45°. Thin, strong box walls. Forged from alloy steel. Chrome plated.



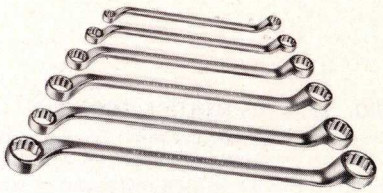
8101M



8102M - 8113M

NO.	OPENING MM	HEAD THICKNESS MM SMALL HEAD	HEAD THICKNESS MM LARGE HEAD	LENGTH MM	WEIGHT GRAMS
*8101M	6 x 7	5.9 - 6.7		136.0	27.0
8102M	8 x 9	6.7 - 7.6		159.0	36.0
8103M	10 x 11	7.6 - 8.3		179.0	86.0
8104M	12 x 13	8.7 - 9.1		205.0	113.0
8105M	14 x 15	9.1 - 10.3		235.0	168.0
8106M	16 x 17	10.3 - 11.5		254.0	200.0
8107M	18 x 19	11.5 - 12.3		272.0	227.0
8108M	20 x 22	13.1 - 13.5		259.0	304.0
8109M	21 x 23	13.1 - 13.5		259.0	304.0
8110M	24 x 26	14.3 - 15.1		349.0	399.0
8111M	25 x 28	15.1 - 16.3		375.0	490.0
8112M	26 x 29	15.5 - 16.3		400.0	504.0
8113M	27 x 32	15.5 - 17.5		426.0	626.0

*6-Pt.



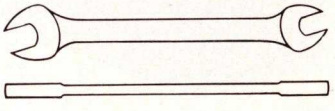
SET NO. 8100A-M
(BOX NOT ILLUSTRATED)

NO. 8100A-M OFFSET BOX WRENCH SET

NO.	DESCRIPTION	SIZE
8103M	Box wrenches	10 x 11 mm
8104M	Box wrenches	12 x 13
8106M	Box wrenches	16 x 17
8107M	Box wrenches	18 x 19
8109M	Box wrenches	21 x 23
8110M	Box wrenches	24 x 26
	Cardboard Box	

OPEN END WRENCHES

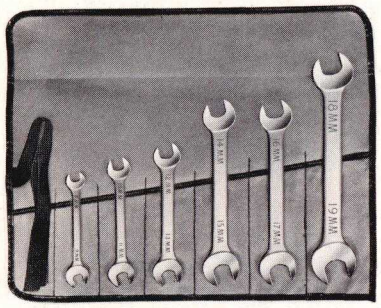
Slim, scientifically tapered jaws reduce width of pear-shaped heads to permit work in close places but are extra strong at points of greatest strain. Jaws have minimum overhang to speed seating on nut and increase strength. Heads at 15° angle permit turning arc of only 30°. Streamlined shanks are easy on hands. Forged from alloy steel. Chrome plated.



NO.	OPENING MM	HEAD THICKNESS MM	LENGTH MM	WEIGHT GRAMS
30607	6 x 7	4.4	114.3	18.1
30809	8 x 9	5.1	123.8	27.2
31011	10 x 11	5.6	133.4	31.8
31213	12 x 13	6.4	142.9	54.4
31415	14 x 15	7.5	171.5	104.3
31617	16 x 17	8.3	206.4	104.3
31819	18 x 19	8.7	217.5	172.4
32022	20 x 22	9.4	254.0	272.2
32123	21 x 23	9.4	260.4	254.0
32426	24 x 26	11.1	282.6	353.8
32528	25 x 28	12.7	352.4	544.3
32732	27 x 32	12.7	377.8	644.1
33236	32 x 36	14.3	450.8	1043.3
33641	36 x 41	16.3	495.3	1360.8

METRIC – OPEN END, COMBINATION BOX AND OPEN END WRENCHES/SETS

See page 23 for Standard sizes.



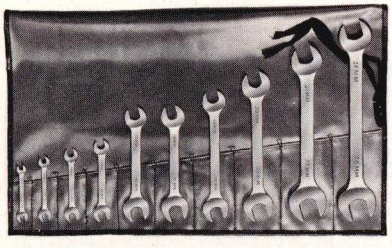
NO. 30000R OPEN END WRENCH SET

NO.	DESCRIPTION	SIZE
30809	Open end wrench	8 x 9 mm
31011	Open end wrench	10 x 11
31213	Open end wrench	12 x 13
31415	Open end wrench	14 x 15
31617	Open end wrench	16 x 17
31819	Open end wrench	18 x 19
2407	Vinyl kit	

NO. 30000P-M OPEN END WRENCH SET*

NO.	DESCRIPTION	SIZE
31011	Open end wrench	10 x 11 mm
31213	Open end wrench	12 x 13
31415	Open end wrench	14 x 15
31819	Open end wrench	18 x 19
32123	Open end wrench	21 x 23
2409M	Vinyl kit	

**Not illustrated*



NO. 30000A OPEN END WRENCH SET

NO.	DESCRIPTION	SIZE
30607	Open end wrench	6 x 7 mm
30809	Open end wrench	8 x 9
31011	Open end wrench	10 x 11
31213	Open end wrench	12 x 13
31415	Open end wrench	14 x 15
31617	Open end wrench	16 x 17
31819	Open end wrench	18 x 19
32022	Open end wrench	20 x 22
32123	Open end wrench	21 x 23
32426	Open end wrench	24 x 26
2414	Vinyl kit	

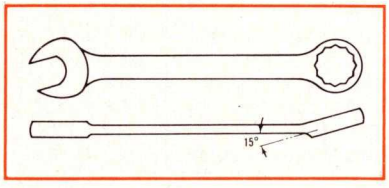
NO. 30000R-M OPEN END WRENCH SET*

NO.	DESCRIPTION	SIZE
30809	Open end wrench	8 x 9 mm
31011	Open end wrench	10 x 11
31213	Open end wrench	12 x 13
31415	Open end wrench	14 x 15
31617	Open end wrench	16 x 17
31819	Open end wrench	18 x 19
32022	Open end wrench	20 x 22
32123	Open end wrench	21 x 23
32426	Open end wrench	24 x 26
32732	Open end wrench	27 x 32
2406M	Vinyl kit	

**Not illustrated*

COMBINATION BOX & OPEN END WRENCHES

Introduced in America by Proto. All features of open end and box wrenches. Same opening size on each end. Use safe box end for breaking loose a nut, and speedy open end for running off nut. Forged iron from alloy steel. Chrome plated. Box openings are 12-point, except wrenches marked †, which have 6-point box.



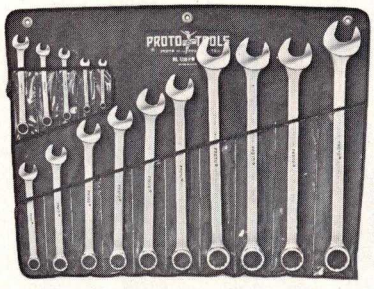
1206M - 1250M

NO.	OP. MM	HEAD THKNS. MM	BOX OPEN. MM	LGTH. MM	WT., GRAMS
†1206M	6	4.5	6.35	84.0	10.0
†1207M	7	4.5	6.35	84.0	10.0
1208M	8	4.8	6.5	95.2	13.6
1209M	9	4.8	6.5	101.6	27.2
1210M	10	4.8	7.3	123.8	27.2
1211M	11	5.5	8.1	133.4	45.4
1212M	12	5.5	8.1	142.9	45.4
1213M	13	6.3	8.5	152.4	63.5
1214M	14	7.1	8.9	171.4	90.7
1215M	15	7.1	8.9	190.5	90.7
1216M	16	7.9	10.5	190.5	122.5
1217M	17	8.3	11.3	209.5	154.2
1218M	18	8.3	11.3	222.2	154.2
1219M	19	9.1	12.1	235.0	249.5
1220M	20	9.4	12.9	260.4	412.0
1221M	21	9.4	12.9	260.4	249.5
1222M	22	9.8	12.9	285.8	294.8
1223M	23	10.6	14.1	314.3	372.0
1224M	24	10.6	14.1	314.3	372.0
1225M	25	11.3	14.5	339.7	426.4
1226M	26	11.3	14.5	339.7	426.4
1227M	27	12.1	15.5	365.1	539.8
1228M	28	12.5	16.1	400.0	616.9
1229M	29	12.5	16.1	400.0	616.9
1230M	30	12.5	16.1	400.0	616.2
1232M	32	12.9	16.8	431.8	726.1
1236M	36	15.9	19.2	523.9	1179.4
1241M	41	16.8	22.4	584.2	1587.6
1246M	46	20.6	27.0	622.3	2630.8
1250M	50	20.6	27.0	660.4	2540.1

†6-Pt.

NO. 1200M COMBINATION BOX & OPEN END WRENCH SET

NO.	DESCRIPTION	SIZE
1211M	Comb. wrench	11 mm
1212M	Comb. wrench	12
1213M	Comb. wrench	13
1214M	Comb. wrench	14
1216M	Comb. wrench	16
1217M	Comb. wrench	17
1219M	Comb. wrench	19
2404M	Vinyl kit	



NO. 1200P-M COMBINATION BOX & OPEN END WRENCH SET

NO.	DESCRIPTION	SIZE
1207M	Comb. wrench	7 mm
1208M	Comb. wrench	8
1210M	Comb. wrench	10
1212M	Comb. wrench	12
1214M	Comb. wrench	14
1216M	Comb. wrench	16
1218M	Comb. wrench	18
1220M	Comb. wrench	20
1222M	Comb. wrench	22
1224M	Comb. wrench	24
1226M	Comb. wrench	26
1228M	Comb. wrench	28
1229M	Comb. wrench	29
1230M	Comb. wrench	30
1232M	Comb. wrench	32
2413M	Vinyl kit	

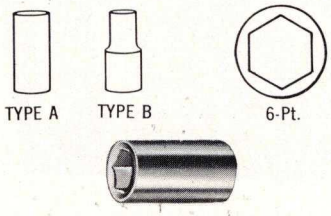
METRIC – 1/4" SQ. DR. MIDGET SOCKET WRENCHES ATTACHMENTS SETS

PROTO PROFESSIONAL TOOLS

1/4" SQUARE DRIVE MIDGET SOCKET WRENCHES

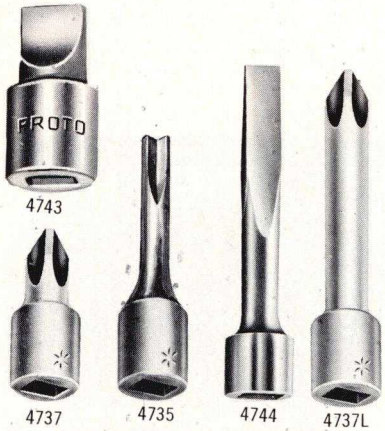
Save time and trouble on little jobs that ordinary sockets can't handle, such as repair of carburetors, distributors, radios, instruments, etc. Accurately made from alloy steels for super strength. Chrome plated. All 6 point.

SOCKET TYPE



1/4" SQ. DR. SOCKETS/6-POINT

NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
4704M	B	4	11.1	22.2	4.5
4705M	B	5	11.1	22.2	9.1
4706M	B	6	11.1	22.2	9.1
4707M	B	7	11.1	22.2	9.1
4708M	A	8	11.1	22.2	9.1
4709M	A	9	12.7	22.2	13.6
4710M	A	10	14.3	22.2	13.6
4711M	A	11	15.9	22.2	18.1
4712M	A	12	16.7	22.2	22.7



1/4" SQUARE DRIVE SCREWDRIVER & SPECIAL SOCKETS

NO.	LENGTH MM	WEIGHT GRAMS
4735	38.1	18.1
4736	38.1	18.1
4737	27.0	9.1
4737L	52.4	13.6
4738	27.0	9.1
4738L	52.4	13.6
4743	25.4	9.1
4744	42.9	13.6
4745	73.0	18.1
6535	27.0	9.1

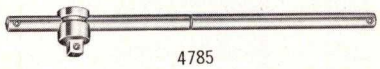
1/4" SQUARE DRIVE MIDGET SOCKET HANDLES, ATTACHMENTS & SETS

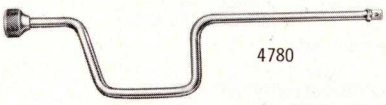
The several styles of handles and attachments permit many types of assemblies for easy handling of difficult jobs. All are made from alloy steel. Chrome plated.

See page 49 for Standard sizes.
See page 64 for Power & Impact sizes.

4749

4766


4785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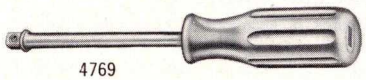

4769

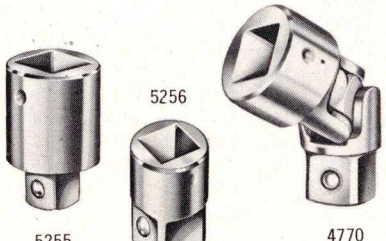
1/4" SQUARE DRIVE SOCKET HANDLES

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
4749	Ratchet	127.0	95.3
4750	Ratchet spinner	114.3	81.6
4766	Hinge handle	136.5	68.0
4767	Stub handle	54.8	31.8
4769	Plastic handle	155.6	72.6
4780	Speed handle	406.4	176.9
4785	Sliding bar handle	114.3	36.3

4765

4761

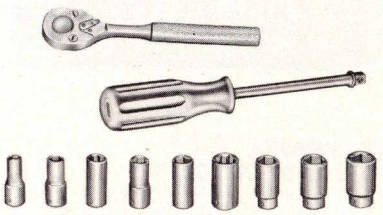
4760 4759



4763

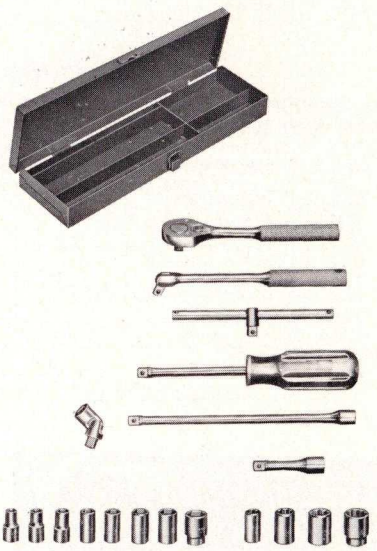
ATTACHMENTS

4759	Extension, 50.8mm	50.8	18.1
4760	Extension, 88.9mm	88.9	22.7
4761	Extension, 152.4mm	152.4	36.3
4763	Extension, 355.6mm	355.6	81.6
4765	Flexible extension	152.4	36.3
4770	Universal joint	32.9	18.1
5255	Adapter 3/8" f x 1/4" m	29.2	22.7
5256	Adapter 1/4" f x 3/8" m	23.8	13.6



SET NO. 4700G-M

SET NO. 4700F-M



NOS. 4700F-M, 4700G-M SETS

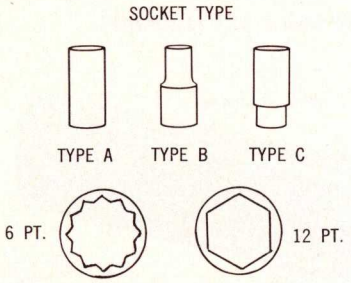
NO.	DESCRIPTION	SET 4700G-M	SET 4700F-M
4706M	6-pt., 6 mm open.		1
4707M	6-pt., 7 mm open.	1	1
4708M	6-pt., 8 mm open.	1	1
4709M	6-pt., 9 mm open.	1	1
4710M	6-pt., 10 mm open.	1	1
4711M	6-pt., 11 mm open.	1	1
4712M	6-pt., 12 mm open.	1	1
4749	Ratchet	1	1
4759	Extension, 50.8 mm		1
4761	Extension, 152.4 mm		1
4766	Hinge handle		1
4769	Plastic handle	1	1
4770	Universal joint		1
4785	Sliding bar handle	1	1
4795	Steel box	1	
4796	Metal box		1

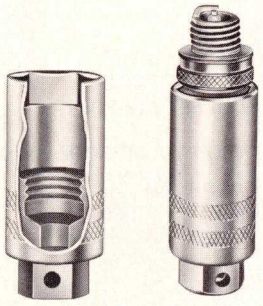
PROTO PROFESSIONAL TOOLS

See page 51 for Standard sizes.
See page 65 for Power & Impact sizes.

3/8" SQUARE DRIVE SOCKET WRENCHES

Useful drive size for many types of service and repair work. Sockets have thin walls to get at hard-to-reach nuts. Made from alloy steel. Chrome plated.



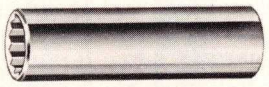


NO. 5026 HPA SPECIAL SPARK PLUG HOLDING SOCKET

NO.	OPENING	LENGTH MM	WEIGHT GRAMS
5026HPA	20.6mm (13/16")	63.5	108.9

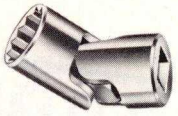
3/8" SQUARE DRIVE REGULAR HEX SOCKETS / 6-POINT

NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
5206MH	B	6	15.9	27.0	18.1
5207MH	B	7	15.9	27.0	18.1
5208MH	B	8	15.9	27.0	18.1



3/8" SQUARE DRIVE DEEP SOCKETS / 12-POINT

5009M	B	9	15.9	54.0	45.4
5010M	B	10	15.9	54.0	45.4
5011M	A	11	15.9	54.0	36.3
5012M	A	12	18.3	54.0	45.4
5013M	A	13	18.3	54.0	45.4
5014M	A	14	19.8	54.0	63.5
5015M	A	15	22.2	54.0	68.0



3/8" SQUARE DRIVE UNIVERSAL JOINT SOCKETS / 12-POINT

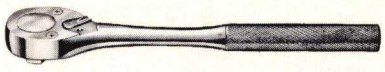
NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
5272M	B	9	18.3	39.3	40.8
5273M	B	10	18.3	39.3	40.8
5274M	B	11	18.3	39.3	40.8
5275M	A	12	18.3	41.7	45.4
5276M	A	13	18.3	41.7	45.4
5277M	A	14	19.8	45.2	49.9
5278M	C	15	22.2	49.6	54.4

3/8" SQUARE DRIVE SOCKETS / 12-POINT

5208M	B	8	15.9	27.0	18.1
5209M	B	9	15.9	27.0	18.1
5210M	B	10	16.7	27.0	22.7
5211M	A	11	15.9	27.0	22.7
5212M	A	12	15.9	27.0	27.2
5213M	A	13	18.2	28.6	27.2
5214M	C	14	19.8	28.6	27.2
5215M	C	15	21.4	28.6	37.3
5216M	C	16	21.4	28.6	31.8
5217M	C	17	23.8	28.6	37.3
5218M	C	18	25.4	30.1	45.4
5219M	C	19	26.2	30.1	59.0
5220M	C	20	26.2	30.2	54.4
5221M	C	21	27.0	30.2	54.4
5222M	C	22	28.6	30.2	68.0

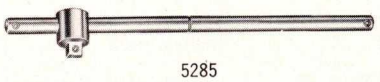
SCREWDRIVER SOCKETS

NO.	SIZE OF BIT	LENGTH MM	WEIGHT GRAMS
5235	Clutch hd. 6.4 mm bit	50.8	36.3
5236	Clutch hd. 7.9 mm bit	50.8	31.8
5237	Clutch hd. 9.5 mm bit	50.8	31.8
5240	7.9x1.0 mm	78.6	36.3
5241	Phillips No. 2	41.3	22.7
5242	Phillips No. 3	41.3	22.7
5243	Phillips No. 4	41.3	27.2
5244	17.5x3.0 mm	26.2	36.5
5246	6.4x.75 mm	47.6	27.2

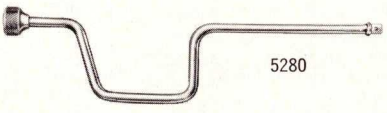


5249

5266



5285



5280

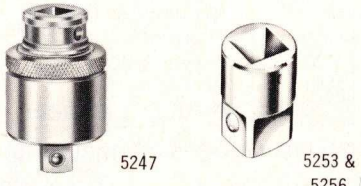
3/8" SQUARE DRIVE SOCKET HANDLES AND ATTACHMENTS

With the several styles of handles and attachments available, a great many types of drive combinations can be assembled for various nut-running jobs. Made from alloy steel. Chrome plated.

HANDLES

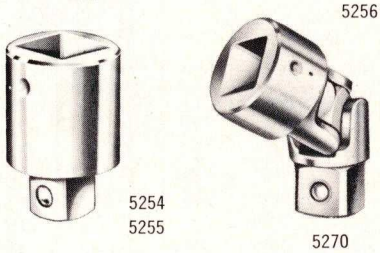
NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5249	Reversible ratchet	177.8	249.5
5265	Hinge handle	187.3	176.9
5266	Hinge handle	304.8	376.5
5280	Speed handle	428.7	376.5
5285	Sliding bar T handle	203.2	140.6

5259-5263



5247

5253 & 5256



5254
5255

5270

ATTACHMENTS

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5247	Ratchetor	50.8	149.7
5253	Adapter 3/8" f x 1/2" m	29.4	31.8
5254	Adapter 1/2" f x 3/8" m	35.7	45.4
5255	Adapter 3/8" f x 1/4" m	29.2	22.7
5256	Adapter 1/4" f x 3/8" m	23.8	13.6
5259	Extension bar	44.4	40.8
5260	Extension bar	88.9	59.0
5261	Extension bar	190.5	113.4
5262	Extension bar	304.8	167.8
5263	Extension bar	436.4	240.4
5270	Universal joint	42.9	45.4

METRIC – 3/8" SQUARE DRIVE SOCKET WRENCH SETS

PROTO PROFESSIONAL TOOLS

See page 51 for Standard sizes.
See page 65 for Power & Impact sizes.

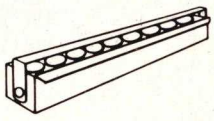
NO. 5000C-M 3/8" SQUARE DRIVE SOCKET WRENCH SET /12-POINT

NO.	DESCRIPTION	SIZE
5009M	Socket	9 mm
5010M	Socket	10
5011M	Socket	11
5012M	Socket	12
5013M	Socket	13
5014M	Socket	14
5015M	Socket	15
5096	Tray	

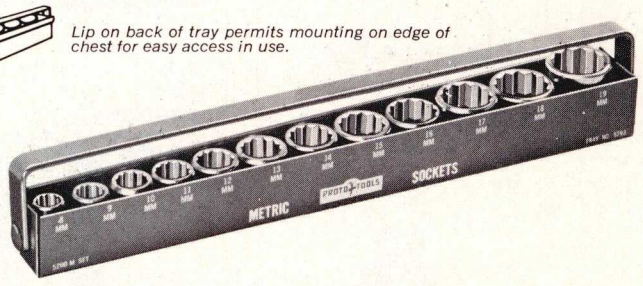
NO. 5200-M 3/8" SQUARE DRIVE SOCKET WRENCH SET /12-POINT

Expanded set that handles almost all 3/8" drive jobs.

NO.	DESCRIPTION	SIZE
5208M	Socket	8 mm
5209M	Socket	9
5210M	Socket	10
5211M	Socket	11
5212M	Socket	12
5213M	Socket	13
5214M	Socket	14
5215M	Socket	15
5216M	Socket	16
5217M	Socket	17
5218M	Socket	18
5219M	Socket	19
5293	Tray	

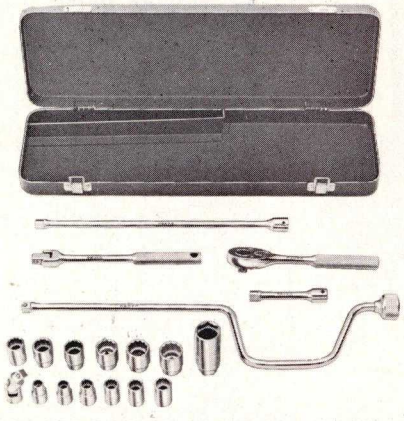


Lip on back of tray permits mounting on edge of chest for easy access in use.



NO. 5200F-M 3/8" SQUARE DRIVE SOCKET WRENCH SET /12-POINT

NO.	DESCRIPTION	SIZE
5208M	Socket	8 mm
5209M	Socket	9
5210M	Socket	10
5211M	Socket	11
5212M	Socket	12
5213M	Socket	13
5214M	Socket	14
5215M	Socket	15
5216M	Socket	16
5217M	Socket	17
5218M	Socket	18
5219M	Socket	19
5026HPA	Spark Plug	20.6
5249	Ratchet	
5260	Extension	
5262	Extension	
5265	Hinge handle	
5270	Universal joint	
5280	Speed handle	
5295	Box	



NO. 5200FA-M 3/8" SQUARE DRIVE SOCKET WRENCH SET /12-POINT

Identical to 5200F-M, except minus box No. 5295.

METRIC CONVERSION TABLE

See page 116 for complete conversion chart

INCHES		
FRACT.	DEC.	M M
—	.0004	.01
—	.004	.10
—	.01	.25
1/64	.0156	.397
—	.0197	.50
—	.0295	.75
1/32	.03125	.794
—	.0394	1.
3/64	.0469	1.191
—	.059	1.5
1/16	.062	1.588
5/64	.0781	1.984
—	.0787	2.
3/32	.094	2.381
—	.0984	2.5
7/64	.109	2.778
—	.1181	3.
1/8	.125	3.175
—	.1378	3.5
9/64	.141	3.572
5/32	.156	3.969

INCHES		
FRACT.	DEC.	M M
—	.1575	4.
11/64	.172	4.366
—	.177	4.5
3/16	.1875	4.763
—	.1969	5.
13/64	.203	5.159
—	.2165	5.5
7/32	.219	5.556
15/64	.234	5.953
—	.2362	6.
1/4	.250	6.350
—	.2559	6.5
17/64	.2656	6.747
—	.2756	7.
9/32	.281	7.144
—	.2953	7.5
19/64	.297	7.541
5/16	.312	7.938
—	.315	8.
21/64	.328	8.334
—	.335	8.5
11/32	.344	8.731

INCHES		
FRACT.	DEC.	M M
—	.3543	9.
23/64	.359	9.128
—	.374	9.5
3/8	.375	9.525
25/64	3.91	9.922
—	.3937	10.
13/32	.406	10.319
—	.413	10.5
27/64	.422	10.716
—	.4331	11.
7/16	.438	11.113
29/64	.453	11.509
15/32	.469	11.906
—	.4724	12.
31/64	.484	12.303
—	.492	12.5
1/2	.500	12.700
—	.5118	13.
33/64	.5156	13.097
17/32	.531	13.494
35/64	.547	13.891
—	.5512	14.

INCHES		
FRACT.	DEC.	M M
9/16	.563	14.288
—	.571	14.5
37/64	.578	14.684
—	.5906	15.
19/32	.594	15.081
39/64	.609	15.478
5/8	.625	15.875
—	.6299	16.
41/64	.6406	16.272
—	.6496	16.5
21/32	.656	16.669
—	.6693	17.
43/64	.672	17.066
11/16	.6875	17.463
45/64	.703	17.859
—	.7087	18.
23/32	.719	18.256
—	.7283	18.5
47/64	.734	18.653
—	.7480	19.
3/4	.750	19.050
49/64	.7656	19.447

INCHES		
FRACT.	DEC.	M M
25/32	.781	19.844
—	.7874	20.
51/64	.797	20.241
13/16	.8125	20.638
—	.8268	21.
53/64	.828	21.034
27/32	.844	21.431
55/64	.859	21.828
—	.8661	22.
7/8	.875	22.225
57/64	.8906	22.622
—	.9055	23.
29/32	.9062	23.019
59/64	.922	23.416
15/16	.9375	23.813
—	.9449	24.
61/64	.953	24.209
31/32	.969	24.606
—	.9843	25.
63/64	.9844	25.003
1	1.000	25.400
—	1.0236	26.

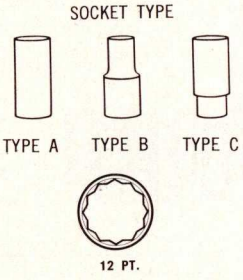
METRIC – ½″ SQUARE DRIVE SOCKETS, HANDLES / ATTACHMENTS

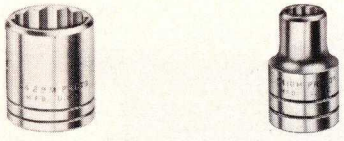
PROTO® PROFESSIONAL TOOLS

See page 55 for Standard sizes.
See page 66 for Power & Impact sizes.

½″ SQUARE DRIVE SOCKET WRENCHES

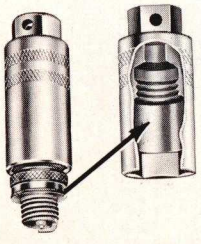
Most popular drive size. Widely used for all types of professional repair and service jobs. Alloy steel. Chrome plated.





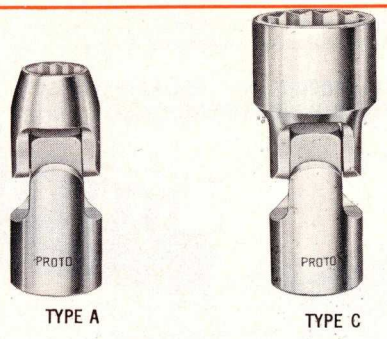
REGULAR SOCKETS / 12-POINT

NO.	TYPE	OP. SIZE MM	MAX. O.D. MM	TOTAL LGTH. MM	WT., GRAMS
5410M	B	10	22.2	36.5	40.8
5411M	B	11	22.2	36.5	40.8
5412M	B	12	22.2	35.7	54.4
5413M	B	13	22.2	35.7	50.0
5414M	B	14	22.2	35.7	45.4
5415M	B	15	22.2	35.7	50.0
5416M	A	16	23.0	35.7	72.6
5417M	A	17	23.0	35.7	59.0
5418M	A	18	26.2	35.7	77.1
5419M	A	19	26.2	35.7	72.6
5420M	A	20	28.6	35.7	81.6
5421M	A	21	28.6	35.7	95.3
5422M	A	22	28.6	38.9	113.4
5423M	A	23	31.0	38.9	145.2
5424M	A	24	31.0	38.9	167.8
5425M	A	25	32.5	38.9	136.1
5426M	A	26	34.9	38.9	145.2
5427M	A	27	34.9	38.9	141.0
5428M	A	28	38.1	45.2	222.3
5429M	A	29	38.1	45.2	208.7
5430M	A	30	38.9	45.2	213.2
5432M	A	32	41.3	45.2	222.2
5435M	A	35	47.6	57.2	340.2
5436M	A	36	49.2	57.2	362.9
5438M	A	38	50.8	57.2	408.2
5441M	A	41	55.6	57.2	453.6



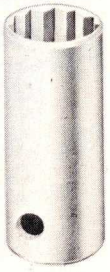
NO. 5326 HPA SPECIAL SPARK PLUG HOLDING SOCKET

NO.	OPENING	LENGTH MM	WEIGHT GRAMS
5326HPA	20.6 mm (13/16″)	64.3	99.8



UNIVERSAL SOCKETS / 12-POINT

NO.	TYPE	OP. SIZE MM	MAX. O.D. MM	TOTAL LGTH. MM	WT., GRAMS
5474M	A	11	23.8	54.4	90.7
5475M	A	12	23.8	54.4	113.4
5477M	A	14	23.8	55.2	108.9
5478M	A	15	23.8	58.3	113.4
5480M	A	17	23.8	61.9	122.5
5482M	C	19	27.0	65.1	136.1
5485M	C	22	31.0	68.3	149.7



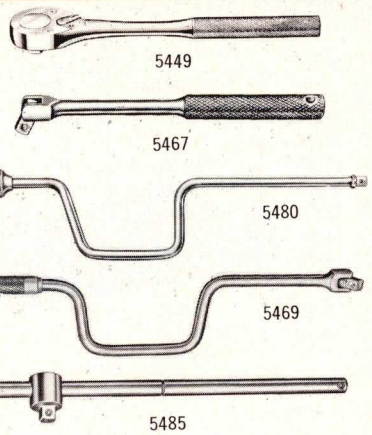
EXTRA DEEP SOCKETS / 12-POINT

5316M	B	16	23.0	82.5	127.0
5317M	B	17	25.4	82.5	154.2
5318M	B	18	25.4	82.5	154.2
5319M	B	19	27.0	82.5	181.4
5320M	B	20	28.6	82.5	181.4
5321M	B	21	28.6	82.5	181.4
5322M	B	22	30.2	82.5	199.6
5324M	B	24	31.8	82.5	235.9
5325M	B	25	34.9	82.5	272.2
5326M	B	26	36.5	82.5	308.4

½″ SQUARE DRIVE SCREWDRIVER SOCKETS

For use on drag links and for adjusting large slotted screws on steering assemblies, shock absorbers, starters.

NO.	LENGTH MM	SIZE OF BIT	WEIGHT GRAMS
5444	31.8	19.1x3.1	63.5
5446	31.8	23.8x3.9	90.7

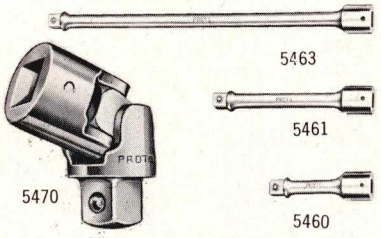


½″ SQUARE DRIVE STANDARD SOCKET HANDLES

Designed, engineered and manufactured for precise and complete interchange-ability. Wide selection permits an almost unlimited number of assemblies for handling all types of jobs. Made from alloy steel. Chrome plated.

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5449	*Reversible ratchet	254.0	580.6
5450	*Reversible ratchet	400.0	825.6
5466	†Hinge handle	254.0	526.2
5467	†Hinge handle	381.0	707.6
5468	†Hinge handle	454.2	757.5
5469	Speed hinge handle	457.2	843.7
5480	Speed handle	457.2	689.5
5485	Sliding bar T handle	328.5	426.4

†Has hole for turning with pin handle.
**Ratchet has short arc, low-drag, trouble-free action. Easily reversed with flip of thumb.*



½″ SQUARE DRIVE SOCKET ATTACHMENTS

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5253	Adapter, 3/8″ f x 1/2″ m	29.4	31.8
5254	Adapter, 1/2″ f x 3/8″ m	35.7	45.4
*5447	Ratcheting attach.	66.7	331.1
5453	Adapter, 3/4″ f x 1/2″ m	54.0	172.4
5460	Extension bar	63.5	108.9
5461	Extension bar	127.0	158.8
5463	Extension bar	254.0	285.8
5464	Extension bar	457.2	467.2
5465	Extension bar	914.4	1406.2
5470	Universal joint	62.3	117.9
5653	Adapter, 1/2″ f x 3/4″ m	38.1	99.8

**The "ratchetor." Converts any ½″ dr. non-ratcheting handle or attachment to ratcheting device. Reversible.*

METRIC – ½″ SQUARE DRIVE SOCKET WRENCH SETS

See page 55 for Standard sizes.
See page 66 for Power & Impact sizes.

NO.	DESCRIPTION	SIZE
5316M	Socket	16 mm
5317M	Socket	17
5318M	Socket	18
5319M	Socket	19
5320M	Socket	20
5321M	Socket	21
5322M	Socket	22
5324M	Socket	24
5325M	Socket	25
5326M	Socket	26
5393	Tray	

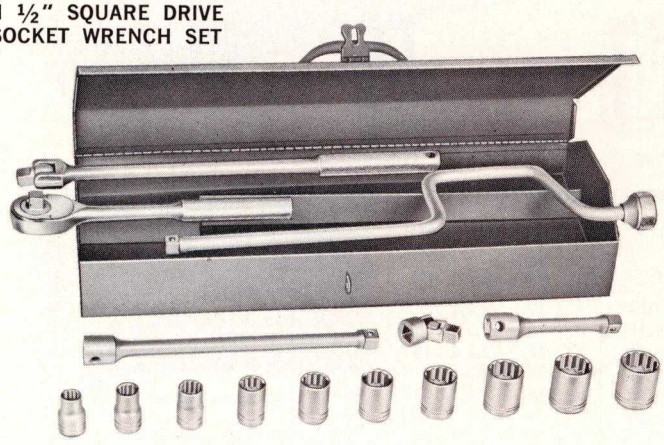
NO. 5300C-M ½" SQUARE DRIVE DEEP SOCKET WRENCH SET

NO. 5300D-M ½" SQUARE DRIVE DEEP SOCKET WRENCH SET

The same as No. 5300C-M, except minus the tray.

NO.	DESCRIPTION	SIZE
5412M	Socket	12 mm
5413M	Socket	13
5414M	Socket	14
5415M	Socket	15
5417M	Socket	17
5419M	Socket	19
5420M	Socket	20
5422M	Socket	22
5424M	Socket	24
5426M	Socket	26
5449	Ratchet	
5461	Extension	
5463	Extension	
5467	Hinge handle	
5470	Universal joint	
5480	Speed handle	
5496	Box	

NO. 5400J-M ½" SQUARE DRIVE STANDARD SOCKET WRENCH SET

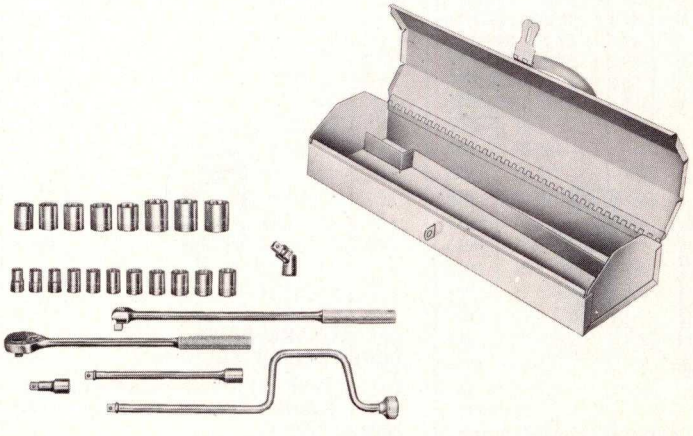


NO. 5400JA-M ½" SQUARE DRIVE STANDARD SOCKET WRENCH SET

Identical to No. 5400J-M, except minus the box No. 5496.

NO.	DESCRIPTION	SIZE
5412M	Socket	12 mm
5413M	Socket	13
5414M	Socket	14
5415M	Socket	15
5416M	Socket	16
5417M	Socket	17
5418M	Socket	18
5419M	Socket	19
5420M	Socket	20
5421M	Socket	21
5422M	Socket	22
5423M	Socket	23
5424M	Socket	24
5425M	Socket	25
5426M	Socket	26
5427M	Socket	27
5428M	Socket	28
5429M	Socket	29
5430M	Socket	30
5449	Ratchet	
5460	Extension	
5463	Extension	
5468	Hinge handle	
5470	Universal joint	
5480	Speed handle	
5496	Box	

NO. 5400K-M ½" SQUARE DRIVE STANDARD SOCKET WRENCH SET



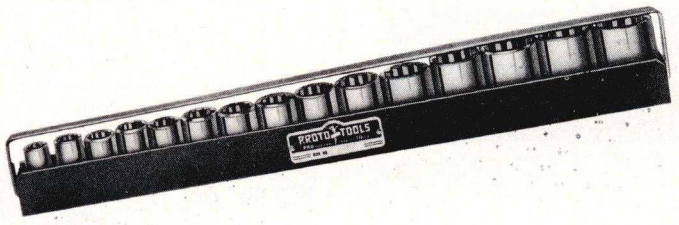
METRIC – ½″/¾″ SQ. DR. HEAVY DUTY SOCKET WRENCHES HANDLES / SETS

PROTO PROFESSIONAL TOOLS

See page 58 for Standard sizes.
See page 67 for power and impact sizes.

NO.	DESCRIPTION	SIZE
5412M	Socket	12 mm
5414M	Socket	14
5415M	Socket	15
5416M	Socket	16
5417M	Socket	17
5418M	Socket	18
5419M	Socket	19
5420M	Socket	20
5422M	Socket	22
5424M	Socket	24
5426M	Socket	26
5427M	Socket	27
5428M	Socket	28
5430M	Socket	30
5432M	Socket	32
5493	Tray	

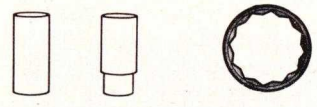
NO. 5400P-M ½″ SQUARE DRIVE STANDARD SOCKET WRENCH SET



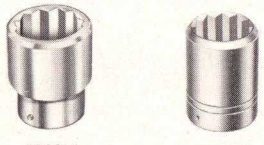
¾″ SQUARE DRIVE HEAVY DUTY SOCKET WRENCHES

Used by mechanics and industrial workers who need strength, speed and safety on tough jobs. Extra length a big feature. Made from alloy steel. Chrome plated.

SOCKET TYPE



TYPE A TYPE C 12 PT.



5528M 5519M

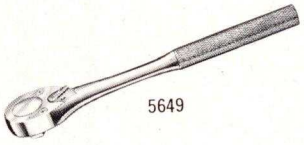
REGULAR SOCKETS/12-POINT

NO.	TYPE	OP. SIZE MM	MAX. O.D. M	TOTAL LGTH. MM	WT., GRAMS
5519M	A	19	33.3	50.8	136.1
5521M	A	21	33.3	50.8	136.1
5522M	A	22	33.3	50.8	140.6
5523M	A	23	36.5	50.8	172.4
5524M	A	24	36.5	50.8	172.4
5525M	A	25	38.1	50.8	213.2
5526M	A	26	38.1	50.8	213.2
5527M	A	27	39.7	50.8	222.3
5528M	C	28	41.3	55.6	272.2
5529M	C	29	41.3	55.6	272.2
5530M	C	30	42.9	57.2	303.9
5532M	C	32	46.0	57.2	322.1
5535M	C	35	49.2	58.7	453.6
5536M	C	36	50.8	60.3	517.1
5538M	C	38	52.4	62.5	530.7
5541M	C	41	57.2	66.7	675.9
5542M	C	42	60.3	69.8	816.5
5546M	C	46	63.5	73.0	893.6
5550M	C	50	69.8	79.4	1256.5
5554M	C	54	74.6	82.5	1406.2
5555M	C	55	76.2	82.5	1474.2
5558M	C	58	79.4	85.7	1587.6
5560M	C	60	82.5	92.1	1642.0

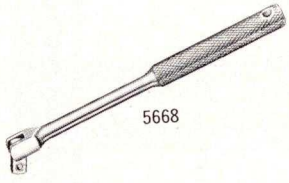
¾″ SQUARE DRIVE HEAVY DUTY SOCKET HANDLES & ATTACHMENTS

Several styles permit many useful drive assembly combinations for handling difficult, heavy jobs. Made from alloy steel. Chrome plated.

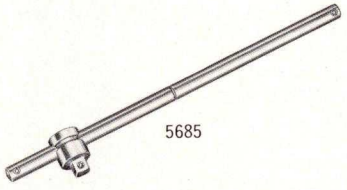
HANDLES



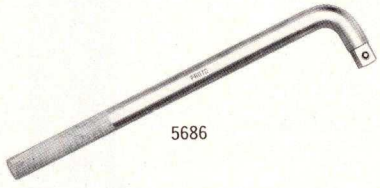
5649



5668



5685



5686

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5649	Reversible ratchet	508.0	2812.3
5668	†Hinge handle	533.4	1723.7
5685	Sliding bar T handle	469.9	172.4
5686	Ell handle	406.4	190.5

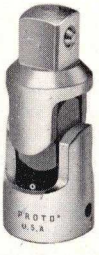
†Has hole for turning with pin handle.

5663

5661

5660

*5647



5670

5453

5653

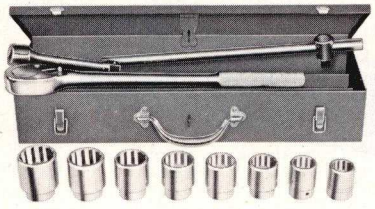
ATTACHMENTS

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5453	Adapter, ¾″ f x ½″ m	50.8	172.4
*5647	Ratcheting attach.	93.6	1134.0
5653	Adapter, ½″ f x ¾″ m	39.7	172.4
5660	Extension bar	127.0	412.8
5661	Extension bar	203.2	616.9
5663	Extension bar	406.4	997.9
5670	Universal joint	92.1	435.5
5853	Adapter, ¾″ f x 1″ m	60.3	317.5
5854	Adapter, 1″ f x ¾″ m	69.8	607.8

**The "ratchetor." Converts any ¾″ dr. non-racheting handle or attachment to racheting device. Reversible.*

METRIC – ¾″ SQ. DR. SKT. WRENCH SETS
TORQUE INDICATING WRENCHES

See page 58 for Standard sizes.
See page 69 for Power & Impact sizes.



NO. 5500D-M ¾″ DR. SOCKET SET

NO.	DESCRIPTION	SIZE
5527M	Socket	27 mm
5529M	Socket	29
5532M	Socket	32
5535M	Socket	35
5536M	Socket	36
5538M	Socket	38
5542M	Socket	42
5546M	Socket	46
5649	Ratchet	
5661	Extension	
5685	Sliding Bar	
5695	Box	

NO. 5500E-M ¾″ DR. SOCKET SET*

NO.	DESCRIPTION	SIZE
5521M	Socket	21 mm
5522M	Socket	22
5523M	Socket	23
5524M	Socket	24
5525M	Socket	25
5526M	Socket	26
5527M	Socket	27
5528M	Socket	28
5529M	Socket	29
5530M	Socket	30
5532M	Socket	32
5535M	Socket	35
5536M	Socket	36
5538M	Socket	38
5541M	Socket	41
5542M	Socket	42
5546M	Socket	46
5550M	Socket	50
5554M	Socket	54
5555M	Socket	55
5558M	Socket	58
5560M	Socket	60
5649	Ratchet	
5660	Extension	
5661	Extension	
5668	Hinge handle	
5670	Universal joint	
5685	Sliding bar	
5696	Box	

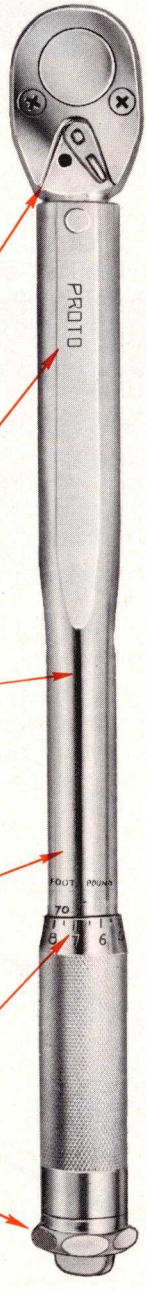
**Not illustrated*

TORQUE INDICATING WRENCHES

6006M
⅜″ SQ. DR.

6016M
½″ SQ. DR.

6018M
¾″ SQ. DR.



Built-in ratchet head adds convenience of racheting to torque operation

No projecting scales or accessories. Less weight and fatigue

Automatic torque-indicating release signals completion of operation — no sounds to listen for — no dials to watch — resets automatically

Enclosure of precision spring and other working parts maintains accuracy and prevents damage

Fine adjustment, deep marking, easy to read

Lock holds exact torque setting

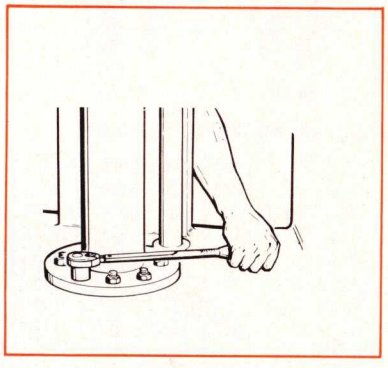
CALIBRATED IN METER KILOGRAMS.

Turn the handle until calibrations show torque setting desired. Attach socket and apply to nut or bolt. Pull up to required torque point without hesitation, eyestrain, earstrain or nervous tension. When right torque is reached, the Proto wrench releases automatically and signals you with its own mechanical action . . . tells you "when" unmistakably. After removal of handle pressure, the wrench resets automatically for the next operation. You can use it in the dark. Blind spots. Noisy places. You can use it on vibrating machinery. Use is under-water, in oil or with gloves on – you will know when pre-set torque is reached.

NO.	CAP. METER KILO-GRAMS	GRAD. METER KILO-GRAMS	SQ. DRIVE SIZE	STYLE OF HEAD
6006M	1-10	0.1	⅜″ drive	Ratchet
6016M	1-20	0.2	½″ drive	Ratchet
6018M	5-35	0.1	¾″ drive	Ratchet

NO.	MAXIMUM DRIVE END WIDTH	OVERALL LENGTH
6006M	35.525 mm 1⅜″	35.4 cm 15″
6016M	45.050 mm 1¾″	45.0 cm 17¾″
6018M	66.680 mm 2⅝″	84.1 cm 33⅛″

No. 6006M—Wt., 698.5 Grams
No. 6016M—Wt., 680.4 Grams
No. 6018M—Wt., 3515.4 Grams



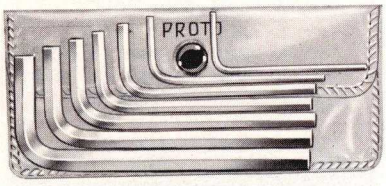
It torques and releases automatically. You don't have to watch or listen.

METRIC – 1/2"/5/8" SQUARE DRIVE POWER SOCKETS HOLLOW HEAD WRENCHES

PROTO PROFESSIONAL TOOLS

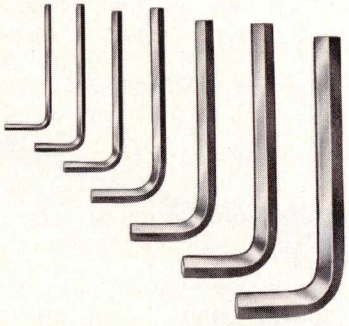
See page 55 for Standard sizes.
See page 66 for Power & Impact sizes.

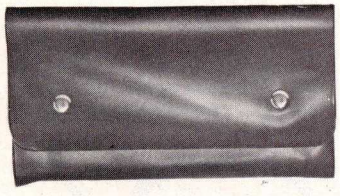
HOLLOW HEAD SCREW WRENCHES



NO. 4975 HOLLOW HEAD SCREW WRENCH SET

For use on many kinds of cars, machine tools, equipment, using metric hollow head screws. All standard length. Heat-treated tool steel. Black, rust-proof finish. For hex sizes: 2 mm; 2.5 mm; 3 mm; 4 mm; 5 mm; 6 mm; 8 mm. In plastic kit. Wt. 167.8 grams.





NO. 4976 HOLLOW HEAD SCREW WRENCH SET

Valuable for industrial maintenance on machine tools, equipment, foreign cars and trucks using metric hollow head screws. All standard length. Heat-treated tool steel. Black, rust-proof finish. For hex sizes: 4 mm; 5 mm; 6 mm; 8 mm; 10 mm; 12 mm; 14 mm. In handy plastic kit. Wt. 621.4 grams.

1/2" SQUARE DRIVE POWER SOCKETS AND ATTACHMENTS

Advanced design, special alloy steels and scientific heat treatment provide these sockets with great strength, toughness, snug fit, freedom from slipping, and maximum clearance for speed and ease in handling. All of these features give a safety factor, long life and low cost. They fit both power nut runners and manual socket handles. Finish is black oxide, with oil dip.

SOCKET TYPE

TYPE A TYPE B 6-PT

1/2" SQUARE DRIVE REGULAR SOCKETS/6-POINT

NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
7408M	B	8	22.2	38.1	54.4
7409M	B	9	22.2	38.1	59.0
7410M	B	10	22.2	38.1	59.0
7411M	B	11	22.2	38.1	63.5
7412M	B	12	23.8	38.1	77.1
7413M	B	13	23.8	38.1	77.1
7414M	B	14	23.8	38.1	77.1
7415M	A	15	25.4	38.1	77.1
7416M	A	16	25.4	38.1	77.1
7417M	A	17	26.2	38.1	99.8
7418M	A	18	26.2	38.1	99.8
7419M	A	19	28.6	38.1	117.9
7421M	A	21	30.2	38.1	172.4
7422M	A	22	32.5	38.1	172.4
7423M	A	23	34.9	44.5	204.1
7424M	A	24	34.9	44.5	204.1
7425M	A	25	36.5	44.5	213.2
7426M	A	26	38.1	50.8	249.5
7427M	A	27	38.1	50.8	249.5
7428M	A	28	41.3	50.8	299.4
7430M	A	30	41.3	50.8	322.1
7432M	A	32	44.5	50.8	358.3

1/2" SQUARE DRIVE DEEP SOCKETS/6-POINT

7308M	B	8	22.2	82.5	149.7
7309M	B	9	22.2	82.5	149.7
7312M	B	12	23.8	83.5	140.6
7314M	B	14	23.8	83.5	167.8
7316M	A	16	25.4	83.5	163.3
7317M	A	17	26.2	83.5	186.0
7318M	A	18	26.2	83.5	186.0
7319M	A	19	28.6	83.5	267.6
7321M	A	21	30.2	83.5	254.0
7322M	A	22	32.5	88.9	281.2
7324M	A	24	34.9	88.9	390.1
7325M	A	25	36.5	88.9	408.2
7326M	A	26	38.1	88.9	453.6

EXTENSION BARS

NO.	MAX. O.D. MM	LENGTH MM	WEIGHT GRAMS
7180P	25.4	51.0	127.0
7181P	25.4	127.0	213.2

HEX. DRIVER EXTENSIONS

NO.	MAX. O.D. MM	LENGTH MM	WEIGHT GRAMS
7121	1/2" Sq. 16.7	7/16" Hex. 69.8	77.1
7123	1/2" Sq. 16.7	7/16" Hex. 127.0	172.4

UNIVERSAL JOINT

NO.	DRIVE SIZE	LENGTH MM	WEIGHT GRAMS
7470	1/2" drive	69.8	172.4

NO. 7400A-M 1/2" SQUARE DRIVE POWER SOCKETS

NO.	DESCRIPTION	SIZE
7413M	Socket	13 mm
7414M	Socket	14
7415M	Socket	15
7416M	Socket	16
7417M	Socket	17
7418M	Socket	18
9974	Tray	

Six 1/2" square drive power sockets that do 90% of automotive impact work are contained in a durable handle-lock tray.

5/8" SQUARE DRIVE POWER SOCKETS AND ATTACHMENTS

5/8" SQUARE DRIVE REGULAR POWER SOCKETS/6-POINT

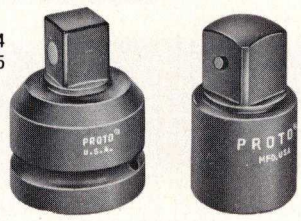
NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
7614M	B	14	27.0	38.1	81.6
7616M	B	16	28.6	38.1	99.8
7617M	B	17	30.2	38.1	117.9
7618M	B	18	30.2	38.1	117.9
7619M	B	19	31.8	44.5	127.0
7620M	A	20	32.5	44.5	145.2
7621M	A	21	32.5	44.5	145.2
7622M	A	22	32.5	44.5	136.1
7623M	A	23	34.9	50.8	226.8
7624M	A	24	34.9	50.8	226.8
7625M	A	25	36.5	50.8	258.5
7626M	A	26	38.1	50.8	290.3
7627M	A	27	38.1	50.8	290.3
7630M	A	30	42.9	50.8	358.3
7632M	A	32	44.5	50.8	403.7

PROTO PROFESSIONAL TOOLS

See page 68 for Power & Impact sizes.

7656

7654
7655



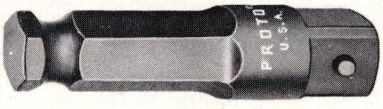
ADAPTERS, EXTENSIONS, UNIVERSAL SOCKETS

ADAPTERS

NO.	FEMALE INCHES	MALE INCHES	LENGTH MM	WEIGHT GRAMS
7654	1/2"	5/8"	44.5	117.9
7655	5/8"	1/2"	47.6	167.8
7656	5/8"	3/4"	50.8	190.5
7657	3/4"	5/8"	49.2	235.9

EXTENSION BARS

NO.	MAX. O.D. MM	LENGTH MM	WEIGHT GRAMS
7185P	32.2	181.0	489.9



HEX. DRIVER EXTENSIONS

NO.	MAX. O.D. MM	LENGTH MM	WEIGHT GRAMS
7151	5/8" Sq. x 5/8" Hex. 20.6	76.2	145.2

UNIVERSAL JOINT

NO.	DRIVE SIZE	LENGTH MM	WEIGHT GRAMS
7670	5/8" drive	76.2	272.2

3/4" SQUARE DRIVE POWER SOCKETS AND ATTACHMENTS

A B C

3/4" SQUARE DRIVE IMPACT SOCKETS /6-POINT

NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
07517M	B	17	41.3	47.6	299.4
07519M	B	19	41.3	47.6	308.4
07521M	B	21	41.3	47.6	281.2
07522M	B	22	41.3	50.8	317.5
07523M	A	23	41.3	50.8	390.1
07524M	A	24	41.3	50.8	390.1
07526M	A	26	41.3	52.4	517.1
07527M	A	27	41.3	52.4	517.1
07528M	A	28	44.5	55.6	580.6
07530M	C	30	47.6	55.6	598.8
07532M	C	32	50.8	55.6	616.9
07533M	C	33	52.4	55.6	598.8
07534M	C	34	54.0	57.2	734.8
07536M	C	36	57.2	58.7	707.6
07538M	C	38	58.7	58.7	734.8
07541M	C	41	61.9	66.7	807.4
07542M	C	42	63.5	69.8	839.2
07543M	C	43	63.5	69.8	889.1
07546M	C	46	66.7	73.0	1134.0
07550M	C	50	74.6	79.4	1224.7

3/4" SQUARE DRIVE "O" RINGS & RETAINING PINS

NO.	DESCRIPTION
07500R	"O" ring f/07517M through 07550M
07500P	Retaining pin f/07517M through 07550M

For extra "O" rings or pins specify socket or extension bar number, to assure proper size.

1" SQUARE DRIVE POWER SOCKETS AND ATTACHMENTS

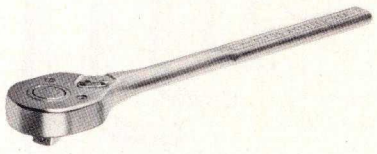
NO.	TYPE	OP. SIZE MM	O.D. MAX. MM	TOTAL LGTH. MM	WT., GRAMS
10019M	B	19	54.0	58.7	435.5
10022M	B	22	54.0	58.7	471.7
10024M	B	24	54.0	58.7	462.7
10027M	B	27	54.0	60.3	580.6
10028M	B	28	54.0	60.3	589.7
10030M	B	30	54.0	60.3	580.6
10032M	A	32	54.0	63.5	557.9
10033M	A	33	54.0	65.1	589.7
10036M	C	36	57.2	68.3	666.3
10041M	A	41	60.3	73.0	807.4
10046M	C	46	69.8	77.8	1134.0
10050M	C	50	76.2	82.5	1451.5
10055M	C	55	82.5	87.3	1814.4
10060M	C	60	88.9	92.1	1905.1
10065M	C	65	95.2	101.6	2449.4

EXTENSION BAR 3/4" FEMALE BY 3/4" MALE

NO.	SHANK DIAM. MM	LENGTH MM	WEIGHT GRAMS
07567	25.4	177.8	870.9

EXTENSION BAR 1" FEMALE BY 1" MALE

NO.	SHANK DIAM. MM	LENGTH MM	WEIGHT GRAMS
10607	34.13	190.5	1678.3



1" SQUARE DRIVE SOCKET HANDLES

NO.	DESCRIPTION	LENGTH MM	WEIGHT GRAMS
5849	Reversible ratchet	650.4	5543.2

1" SQUARE DRIVE "O" RINGS & RETAINING PINS

NO.	DESCRIPTION
10000R1	"O" ring f/10019M through 10036M
10000P1	Retaining pin f/10019M through 10036M
10000R2	"O" ring f/10041M through 10065M
10000P2	Retaining pin f/10041M through 10065M

07656 07655

IMPACT ADAPTERS

NO.	FEMALE INCHES	MALE INCHES	LENGTH MM	WEIGHT GRAMS
07655	3/4"	1"	57.2	326.6
07656	1"	3/4"	69.8	589.7

PROTO PROFESSIONAL TOOLS

RULE AND SCALE GRADUATIONS

Graduations:

No. 3 One face 32nds and 64ths, One face 10ths and 50ths
No. 4 One face 8ths and 16ths, One face 32nds and 64ths
No. 7 One face 16ths and 32nds, One face 64ths and 100ths
No. 10 Two edges only, 32nds and 64ths
No. 11 Two edges only, 64ths and 100ths
No. 16 One face 32nds and 64ths, One face 50ths and 100ths

NO. MO-1P
OUTSIDE MICROMETER — 0" - 1"

Measuring range: 0" - 1"
Graduations: .001"
Satin chrome finish. Forged steel frame, enameled.

NO. MO-2P
OUTSIDE MICROMETER — 1" - 2"

Measuring range: 1" - 2"
Graduations: .001"
Satin chrome finish. Forged steel frame, enameled.

NO. MO-1RL
OUTSIDE MICROMETER — 0" - 1"

Same as **MO-1P,** with friction stop and clamp ring locknut.
Weight: .50 lb. Packaged one per box.

NO. MO-2RL
OUTSIDE MICROMETER — 1" - 2"

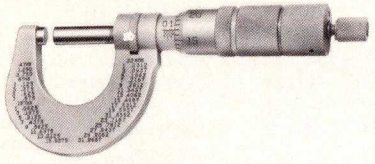
Same as **MO-2P,** with friction stop and clamp ring locknut.
Weight: .68 lb. Packaged one per box.

NO. MO-3RL
OUTSIDE MICROMETER — 2" - 3"

Measuring range: 2" - 3"
Graduations: .001"
Satin chrome finish. Forged steel frame, enameled. With friction stop and clamp ring locknut.
Weight: .87 lb. Packaged one per box.

NO. MO-4RL
OUTSIDE MICROMETER — 3" - 4"

Measuring range: 3" - 4"
Graduations: .001"
Satin chrome finish. Forged steel frame, enameled. With friction stop and clamp ring locknut.
Weight: 1.12 lb. Packaged one per box.



NO. MO-11RL
OUTSIDE MICROMETER — 0" - 1"

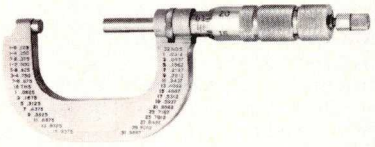
Measuring range: 0" - 1"
Graduations: .001"
Satin chrome finish. Forged steel frame, stamped with table of decimal equivalents to 1/64ths. With friction stop and clamp ring locknut.
Weight: .50 lb. Packaged one per box.

No. 1601-10
OUTSIDE MICROMETER — 0"-1"

Measuring Range: 0"-1"
Graduations: .0001"
Weight: .60
Same as MO-11RL except measures down to ten thousandths of an inch.

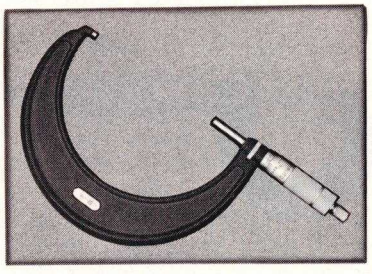
No. 1602-10
OUTSIDE MICROMETER — 1"-2"

Measuring Range: — 1"-2"
Graduations: .0001"
Weight: .80
Same as MO-11RL except measures down to ten thousandths of an inch. Includes 1" Standard.



NO. MO-12RL
OUTSIDE MICROMETER — 1" - 2"

Measuring range: 1" - 2"
Graduations: .001"
Satin chrome finish. Forged steel frame, stamped with table of decimal equivalents to 1/64ths. with friction stop, standard and clamp ring locknut.
One inch standard furnished with each micrometer.
Weight: .68 lb. Packaged one per box.

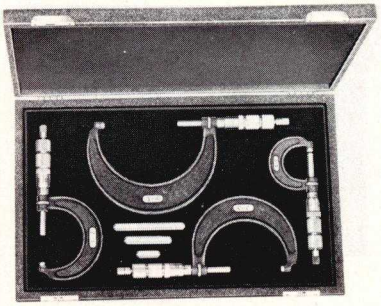


NO. MO-5RL
OUTSIDE MICROMETER — 4" - 5"

Measuring range: 4" - 5"
Graduations: .001"
Satin chrome finish. Forged steel frame, enameled. With friction stop and positive lock ring.
Weight: 1.28 lbs. Packaged one per box.

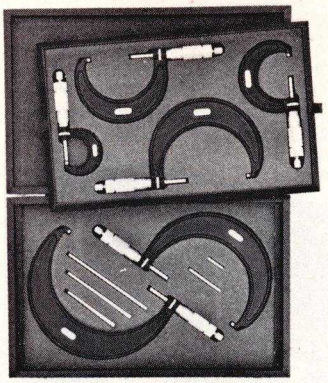
NO. MO-6RL
OUTSIDE MICROMETER — 5" - 6"

Measuring range: 5" - 6"
Graduations: .001"
Satin chrome finish. Forged steel frame, enameled. With friction stop and positive lock ring.
Weight: 1.28 lbs. Packaged one per box.



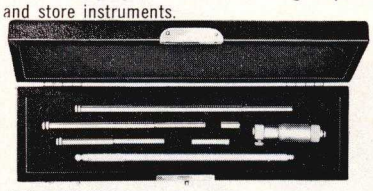
NO. MO-4P
OUTSIDE MICROMETERS

Measuring range: 0" - 4"
Graduation: .001"
Micrometers included in No. MO-4P set:
MO-1RL— 0" - 1" enameled frame
MO-2RL— 1" - 2" enameled frame
MO-3RL— 2" - 3" enameled frame
MO-4RL— 3" - 4" enameled frame
1611-74 Case
Satin chrome finish. Forged steel frame, enameled. With friction stops and clamp ring locknuts. All micrometers with standards.
In foam-plastic lined case.
Weight: 4.56 lbs. Packaged one per box.



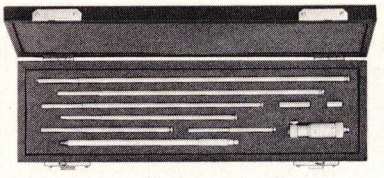
NO. MO-6P OUTSIDE MICROMETERS, SET OF SIX WITH STANDARDS

MO-1RL—0" - 1", enameled frame
MO-2RL—1" - 2", enameled frame
MO-3RL—2" - 3", enameled frame
MO-4RL—3" - 4", enameled frame
MO-5RL—4" - 5", enameled frame
MO-6RL—5" - 6", enameled frame
1611-75 Case
Graduations: .001"
Weight: 7.37 lbs.
With friction stop and positive lock ring. In durable carrying case with soft lining to protect and store instruments.



NO. MI-8P
INSIDE MICROMETER — 2" - 8"

Measuring range: 2" - 8"
Graduations: .001"
Satin chrome finish.
Furnished complete with 4 measuring rods, spacing collars, and extension handle in foam-plastic lined case.
Weight: .68 lb. Packaged one per box.



NO. MI-12P
INSIDE MICROMETER — 2" - 12½"

Measuring range: 2" - 12½"
Graduations: .001"
Satin chrome finish.
Furnished complete with 7 measuring rods, spacing collars, and extension handle in foam-plastic lined case.
Weight: 1.18 lb. Packaged one per box.

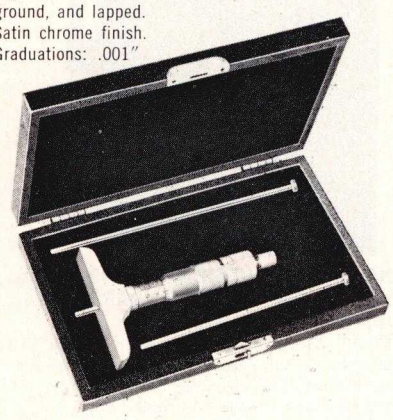
COMPONENTS FOR MI-8P, MI-12P

Number	Description
1611-21	Locking Screw
1611-22	Sleeve ½"
1611-23	Sleeve 1"
1611-24	Extension Rod 3½"
1611-25	Extension Rod 5"
1611-26	Extension Rod 6½"
1611-27	Extension Rod 8"
1611-28	Extension Rod 9½"
1611-29	Extension Rod 11"
1611-30	Extension Rod 12½"
1611-31	Handle
1611-32	Head
1611-33	Case for MI-8P
1611-34	Case for MI-12P

PROTO PROFESSIONAL TOOLS

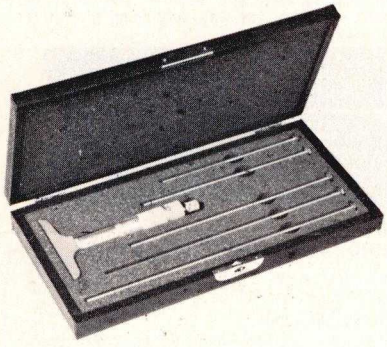
DEPTH MICROMETERS

The graduations on these depth micrometers are placed so they are right side up and can be easily read while the tool is in use. Base has hardened, ground, and lapped surface. Measuring rods are 1/8" diameter with ends hardened, ground, and lapped.
Satin chrome finish.
Graduations: .001"



NO. MD-3F
DEPTH MICROMETER — 0" - 3"

Range 0" - 3". Base 7/16" x 2½". With friction stop and 3 measuring rods. Weight: .81 lb.



NO. MD-6F
DEPTH MICROMETER — 0" - 6"

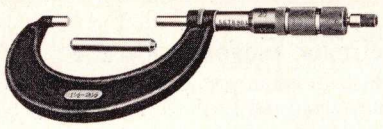
Range 0" - 6". Base 7/16" x 2½". With friction stop and 6 measuring rods. Weight: 1.43 lb. Above sets furnished in durable foam plastic-lined carrying cases.

COMPONENTS FOR MD-3F, MD-6F

Number	Description
1611-41	Rod 0"-1"
1611-42	Rod 1"-2"
1611-43	Rod 2"-3"
1611-44	Rod 3"-4"
1611-45	Rod 4"-5"
1611-46	Rod 5"-6"
1611-48	Case for MD-3F
1611-49	Case for MD-6F

CONNECTING ROD JOURNAL MICROMETERS

With these two "mikes," specially designed for the automotive shop, you can measure the rod journals in practically all cars and trucks. Their measuring ranges (1½" - 2½" and 2½" - 3½") are ideal for this work and will measure the larger rod journals used in the most modern engines. The location of the graduations on the underside of the barrel makes it possible to read the measurement with the micrometer in measuring position, eliminating the need of removing the tool to take the reading.
Satin chrome finish. Forged steel frame, enameled.

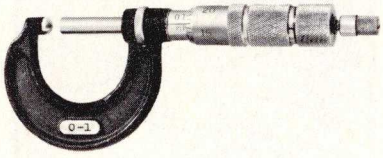


NO. MC-25
CONNECTING ROD JOURNAL MICROMETER — 1½" - 2½"

Range: 1½" - 2½", Graduations: .001".
With friction stop, clamp ring locknut and 2" standard test gage.
Weight: .93 lb. Packaged one per box.

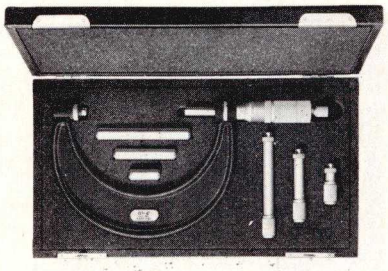
NO. MC-35FL
CONNECTING ROD JOURNAL MICROMETER — 2½" - 3½"

Range: 2½" - 3½", Graduations: .001".
With friction stop, clamp ring locknut and 3" standard test gage.
Weight: 1.18 lb. Packaged one per box.



NO. MB-1P
BALL ANVIL MICROMETER — 0" - 1"

Ball anvil micrometer for measuring bearing inserts, tubing and other curved surfaces.
Range: 0" - 1", Graduations: .001".
Satin chrome finish. Forged steel frame, enameled. With friction stop and clamp ring locknut.
Weight: .50 lb. Packaged one per box.



NO. MR-4FL
OUTSIDE MICROMETER* SET — 0" TO 4"

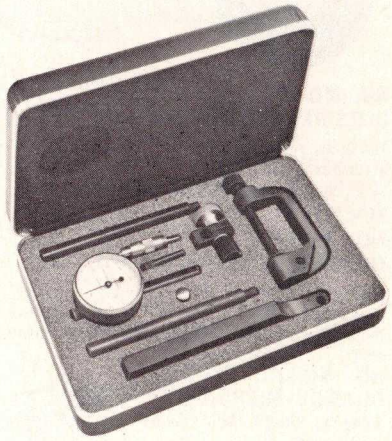
Most measurements in automotive repair work fall within the 0" to 4" range of this special outside micrometer. With its three interchangeable extensions, it can be quickly adjusted to measure anything from a pin to a large piston. Each extension is individually adjustable to compensate for wear, and is fitted with a knurled collar for easy handling. The crowned face of the anvil which eliminates gagging is a new feature of this micrometer.

NO. MR-4FL
Satin chrome finish. Forged steel frame enameled.
Range: 0" - 4", Graduations: .001".
With friction stop and clamp ring locknut and standards. In foam plastic lined case.
Weight: 5.31 lbs. Packaged one per box.

COMPONENTS FOR MR-4FL

Number	Description
1611-11	Anvil Extension 1"
1611-12	Anvil Extension 2"
1611-13	Anvil Extension 3"
1611-14	Case for MR-4FL

*Patented



NO. MD-112 SET
UNIVERSAL DIAL TEST INDICATOR SET — 0" - .200"

The universal dial test indicator is a precision-made jeweled indicator for use where extremely accurate measurements are required. It is sturdy and compact, with all needed component parts in a well made, fitted metal case.
Range: 0" - .200", calibrated to 0" - .100", in increments of .001".
Weight: 2.12 lbs. Packaged one per box.

COMPONENTS FOR MD-112

Number	Description
1611-61	Indicator
1611-62	Spindle Safety Collar
1611-63	Contact Point 3/16"
1611-64	Contact Point 5/16"
1611-65	Sectional Rod 8"
1611-66	Hole Attachment
1611-67	Clamp
1611-68	Rod Connector
1611-69	Cap For Hole Att.
1611-70	Tool Post Holder
1611-71	Contact Point 1"
1611-72	Contact Point 1½"
1611-73	Case for MD-112 Set

NO. SP-5
POCKET SCRIBER — 4 7/8"

Body made of knurled steel tubing and fitted with chuck which holds the finely drawn and tempered scriber point. The point can be removed and reversed for protection.
Overall length: 4 7/8".
Blade length: 2 3/8".
Shipping weight: .04 lb. ea. Packaged six per box.
NO. SP-5-1 Straight replacement point for SP-5 Scriber

Federal Specs.: GGG-S-131d, Type II, Class 1.

Federal Specs.: GGG-S-131d, Type II, Class 2.

NO. SP-8
REPLACEABLE POINTS SCRIBER — 8½"

Made of fine quality steel with carefully tapered, full-hard points. Straight point at one end. Right angle point at other end.
Overall length: 8½".
Shipping weight: .08 lb. ea. Packaged six per box.

NO. SP-8-1

Straight replacement point for SP-8 scriber.

NO. SP-8-2

Right angle replacement point for SP-8 scriber.

NO. SS-5
SINGLE POINT SCRIBER — 5"

Fine quality steel blade with fully hardened point.
Overall length: 5".
Shipping weight: .06 lb. ea. Packaged six per box.

Federal Specs.: GGG-S-131d, Type II, Class 3.

NO. SF-8
FIXED POINT SCRIBER — 8½"

Combination scriber with one straight and one bent point. Top quality steel. Fully hardened points. Fixed body.
Overall length: 8½".
Shipping weight: .08 lb. ea. Packaged six per box.

CENTER PUNCHES

4" long — ⅜" body — nickel plated. Used for marking and for making starting holes in metal, wood, hardboard, etc.

NO.	POINT SIZE
PC-564	5/64"
PC-764	7/64"
PC-964	9/64"
PC-1164	11/64"

Shipping weight: .10 lb. ea. Packaged twelve per box.

PRICK PUNCHES

4" long — ⅜" body — nickel plated. Use for punching holes in sheet metal, steel, aluminum, leather, wood, etc.

NO.	POINT SIZE
PP-764	7/64"
PP-964	9/64"

Shipping weight: .10 lb. ea. Packaged twelve per box.

DRIVE PIN PUNCHES

4" long — ⅜" body — nickel plated. For removing loose pins, taper pins, keys, etc.

NO.	POINT SIZE
PD-2	1/16"
PD-3	3/32"
PD-4	1/8"
PD-5	5/32"
PD-6	3/16"
PD-7	7/32"
PD-8	1/4"
PD-10	5/16"

Shipping weight: .10 lb. ea. Packaged twelve per box.

NARROW HOOK RULE

Spring tempered tool steel, precision ground stiff rule. Machine cut graduations. Deep case hardened hook rigidly held by eccentric stud.

NO.	LENGTH	WIDTH	GRAD.*	SHPG. WT., LB.
RHN-610	6"	7/32"	#10	.05
RHN-611	6"	7/32"	#11	.05

Packaged one per envelope.

Federal Specs.: GGG-R-791d, & Amend. 5, Class 1, Reg. with Positive Hook.

HOOK RULE

Spring tempered tool steel, precision ground rule. Machine cut graduations. Quick reading figures on fine graduations. Deep case hardened hook rigidly held by eccentric stud.

NO.	LENGTH	WIDTH	GRAD.*	SHPG. WT., LB.
RH-604	6"	¾"	#4	.08
RH-616	6"	¾"	#16	.08

Packaged one per envelope.

Federal Specs.: GGG-R-791d, & Amend. 5, Type IV, Class 4. Grade A #4 Graduation.

FLEXIBLE RULES — #4 GRAD.

Full flexible, tempered steel rule. Precision ground. Machine subdivided acid etched graduations. Satin brushed finish. Quick reading figures on fine graduation face.

NO.	LENGTH	WIDTH	THICKNESS	GRADUATION*	SHIPPING WT., LBS.
RF-64	6"	½"	.015"	#4	.06

CHROME RULE

Full flexible, tempered steel rule. Precision ground Machine subdivided acid etched graduations. Satin chrome finish with sharp, clear, black graduations and figures.

RF-64C	6"	½"	.015"	#4	.06

Packaged one per envelope.

Federal Specs.: GGG-R-791d, & Amend. 5, Type IV, Class 4. Grade A #16 Graduation.

FLEXIBLE RULES — #16 GRAD.

Full flexible, tempered steel rule. Precision ground. Machine subdivided acid etched graduations. Satin brushed finish.

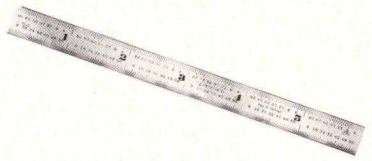
NO.	LENGTH	WIDTH	THICKNESS	GRADUATION*	SHIPPING WT., LBS.
RF-66	6"	½"	.015"	#16	.06

CHROME RULE

Full flexible, tempered steel rule. Precision ground. Machine subdivided acid etched graduations. Satin chrome finish.

RF-66C	6"	½"	.015"	#16	.06

Packaged one per envelope.



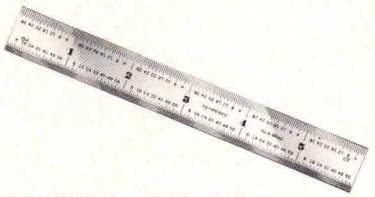
Federal Specs.: GGG-R-791d, & Amend. 5, Type IV, Class 1, except for, RM-1216, RM-1804 & RM-1816.

MACHINISTS RULES

Spring tempered tool steel, precision ground rules. Machine subdivided, acid etched graduations. Satin brushed finish.

NO.	LENGTH	WIDTH	GRAD.*	SHPG. WT., LB.
RM-604	6"	¾"	#4	.06
RM-607	6"	¾"	#7	.06
RM-616	6"	¾"	#16	.06
RM-1204	12"	1"	#4	.30
RM-1216	12"	1"	#16	.30
RM-1804	18"	1"	#4	.31
RM-1816	18"	1"	#16	.31

Packaged one per envelope except RM-1804, RM-1816; three per box.

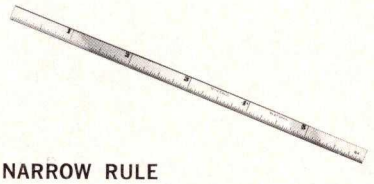


MACHINISTS CHROME RULE

Same as machinists rules, but with satin chrome finish with sharp, clear, black graduations and figures.

NO.	LENGTH	WIDTH	GRAD.*	SHPG. WT., LB.
RM-646C	6"	¾"	#4	.06

Packaged one per envelope.



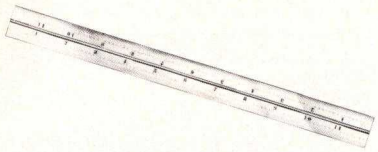
NARROW RULE

Spring tempered tool steel, precision ground rule. Machine cut graduations.

NO.	LENGTH	WIDTH	GRAD.*	SHPG. WT., LB.
RN-610	6"	7/32"	#10	.06
RN-611	6"	7/32"	#11	.06

Packaged one per envelope.

See page 99 for rule and scale graduation, chart.



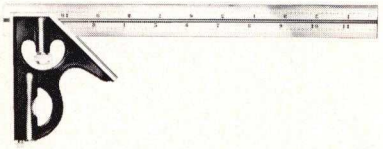
MACHINISTS SQUARE BLADES

BLADES FOR COMBINATION SQUARES, SETS AND BEVEL PROTRACTORS

Full hardened and tempered tool steel blades suitable for use as straight edge. Machine subdivided. Acid etched black figures and graduations. Double inch figures. Quick reading figures on fine graduations. Non-reflecting satin brushed finish.

NO.	BLADE	GRAD.*	SHPG. WT., LBS.
SM-604B	6″	⌗ 4	.12
SM-1204B	12″	⌗ 4	.18
SM-1206B	12″	⌗16	.30

Packaged one per envelope.



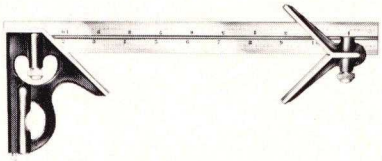
Federal Specs.: GGG-S-656a, & Amend. 5, Type VI, Class A, Style A Graduation. Except SM-1226, which is Style B Graduation (⌗16).

COMBINATION SQUARES WITH SQUARE HEAD ONLY

Cast hard gray iron square and miter head with black Japan finish. Full hardened and tempered steel blade with etched graduations and double inch figures. Quick reading figures on fine graduations.

NO.	BLADE	GRAD.*	SHPG. WT., LBS.
SM-614	6″	⌗4	.46
SM-1214	12″	⌗4	1.05
SM-1216	12″	⌗16	1.05

Packaged one per box.



Federal Specs.: GGG-S-656a, & Amend. 5, Type VI, Class A, Style A Graduation. Except SM-1226, which is Style B Graduation (⌗16).

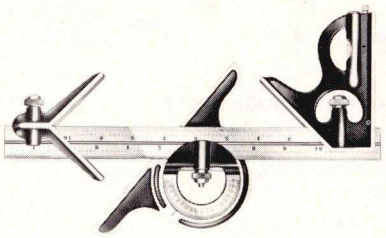
COMBINATION SQUARES WITH SQUARE HEAD AND CENTER HEAD

Cast hard gray iron square head and center head with black Japan finish. Full hardened and tempered steel blade with etched graduations. Full bedded level vial with double, black hair-lines and cats-eye filler.

NO.	BLADE	GRAD.*	SHPG. WT., LBS.
SM-624	6″	⌗4	.60
SM-1224	12″	⌗4	1.35
SM-1226	12″	⌗16	1.35

Packaged one per box.

*See page 99 for rule and graduation chart.



Federal Specs.: GGG-S-656a, & Amend. 5, Type VI, Class A, Style A Graduation.

COMBINATION SETS WITH SQUARE HEAD, CENTER HEAD AND REVERSIBLE PROTRACTOR HEAD

Basic sets for toolmakers and machinists consisting of square and center head, and bevel protractor, made of hard gray iron. Blade full hardened and tempered. Etched graduations and figures. Double indexed protractor graduated 180 degrees in both directions. All cast iron parts with durable black Japan finish.

NO.	BLADE	GRAD.*	SHPG. WT., LBS.
SM-1234	12″	⌗4	2.20
SM-1236	12″	⌗16	2.20

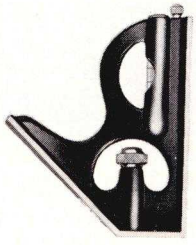
Packaged one per box.

MACHINISTS CENTER HEADS

Hard gray iron body with black Japan finish. Steel parts. Precision tested.

NO. SM-6CH
For 4″, 6″ blades. Shipping weight: .16 lb.

NO. SM-12CH
For 9″ and 12″ blades. Shipping weight: .30 lb.



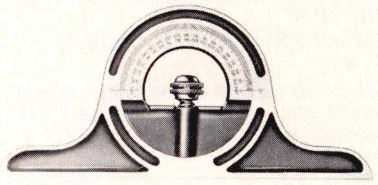
MACHINISTS SQUARE HEADS

Hard gray iron heads with durable black Japan finish. Steel parts, brass scriber bushing, and cats-eye level vial. All working surfaces precision ground and tested.

NO. SM-6SH
For 4″, 6″ blades. Shipping weight: .36 lb.

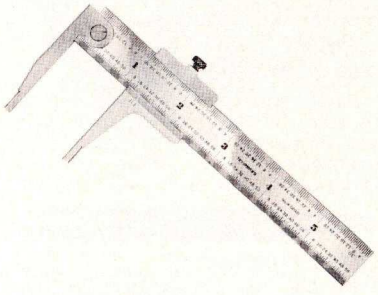
NO. SM-12SH
For 9″ and 12″ blades. Shipping weight: .60 lb.

Packaged one per box.



NO. SM-12BP BEVEL PROTRACTOR

Double indexed protractor graduated 180 degrees in both directions can be read from either index. Body has wide base for support when used with blade in vertical position. Wide base facilitates use as depth gage and inclinometer. Level vial has steel guard. Shipping weight: 1 lb.
Packaged one per box.

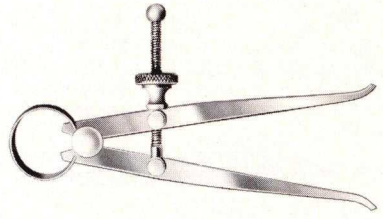


SLIDE CALIPER RULE

For fast and accurate inside or outside measurements. Smooth acting spring tensioned slide has mill-grooved thumb grip for positive one-hand "snap gage" operation. Spring tempered high carbon steel blade carefully ground and lapped for parallelism. Quick reading figures on fine graduations. Zero line on slide for accurate inside measurements. Depth of jaws: 1½″.

NO.	LENGTH	GRAD.*	SHPG. WT., LBS.
RSC-646	6″	⌗4	.20

Packaged one per box.



Federal Specs.: GGG-C-95, & Amend. 1, Type I, Inside, Class 1.

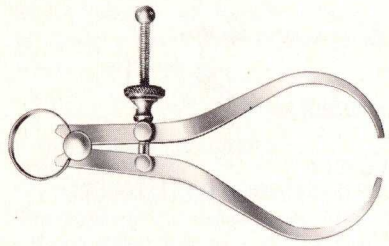
INSIDE SPRING CALIPERS

Brushed, natural steel finish, fully hardened and tempered joints, springs, and washers. Ends fully rounded to give accurate contact with work.

TOOL NO.	SIZE	SHPG. WT., LBS.
CN-3	3″	.06
CN-4	4″	.10
CN-6	6″	.20
CN-8	8″	.25

Packaged three per box.

Federal Specs.: GGG-C-95, & Amend. 1, Type II, Outside, Class 1.

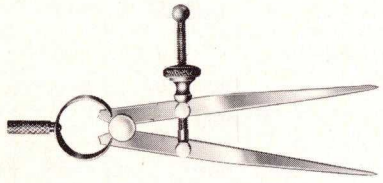


OUTSIDE SPRING CALIPERS

Brushed, natural steel finish, fully hardened and tempered joints, springs, and washers. Ends fully rounded to give accurate contact with work.

TOOL NO.	SIZE	SHPG. WT., LBS.
CO-3	3″	.09
CO-4	4″	.12
CO-6	6″	.21
CO-8	8″	.28

Packaged three per box.



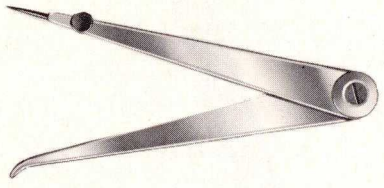
Federal Specs.: GGG-D-351d & Amend. 2, Spring Type A, Class 2.

SPRING DIVIDERS

Brushed, natural steel finish, full hardened and tempered joints, springs, washers, and divider points. High carbon steel legs deeply heat treated for lifetime service. Each divider supplied with a plastic point protector.

TOOL NO.	SIZE	SHPG. WT., LBS.
DS-3	3″	.09
DS-4	4″	.16
DS-6	6″	.21
DS-8	8″	.30

Packaged three per box.



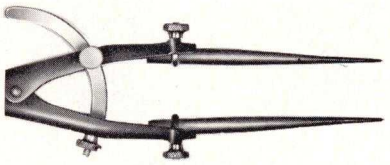
Federal Specs.: GGG-C-95 & Amend. 1, Type III, Adjustable Point.

HERMAPHRODITE CALIPERS

Polished and brushed flat legs with round edges and tips. High quality steel legs. Screw slotted head tensioning joint permits adjustment to needs of user. Tension after adjustment remains constant with usage. One leg has full hardened scribing point held in adjusting assembly.

TOOL NO.	SIZE	SHPG. WT., LBS.
CH-4	4″	.11
CH-6	6″	.19

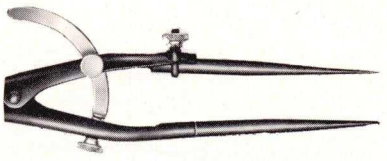
Packaged three per box.



NO. DA-7
FULLY ADJUSTABLE DIVIDER 7″

All steel components. Spring tensioned fine adjustment with two fully hardened replaceable straight points (5/16″). Knurled binding screw locks quadrant.

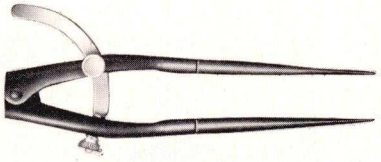
Shipping weight: .32 lb.



NO. DC-7
CARPENTERS DIVIDER 7″

Same quality construction as DA7, but with one replaceable leg designed to hold standard 5/16″ pencil to make carpenter's compass.

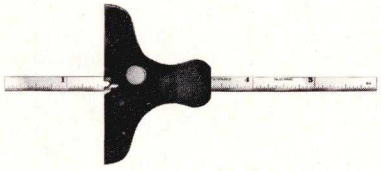
Shipping weight: .32 lb.
All packaged six per box.



NO. DM-7
SHEET METAL DIVIDER 7″

Same quality construction as DA7, but with two fixed divider legs for sheet metal work.

Shipping weight: .28 lb.



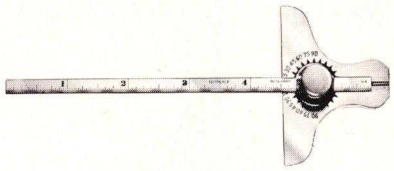
Federal Specs.: GGG-G-17a, Type II, Class 1.

DEPTH GAGE

A fixed, 90 degree angle depth gage with 2½″ precision ground work base. Mottled, case hardened finish on head. Supplied with 6-inch long, .040-inch thick, 7/32-inch wide rule (RN-610). Rule is precision ground to fit head. Packaged one per box.

TOOL NO.	GRAD.
GD-610	#10
GD-611	#11

Shipping weight: .12 lb.

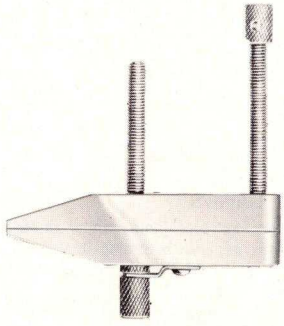


ADJUSTABLE ANGLE DEPTH GAGE

Adjustable angle depth gage with rod. Head marked on both sides of adjusting stud in 15 degree increments. Hardened, bright polished head with precision ground base grooved to hold rod (3/32″ diameter). Narrow rule (RN-610); held under adjusting nut by spring tempered washer which is notched to fit increment grooves in head. Packaged one per box.

TOOL NO.	GRAD.
GD-610-A	#10
GD-611-A	#11

Shipping weight: .12 lb.

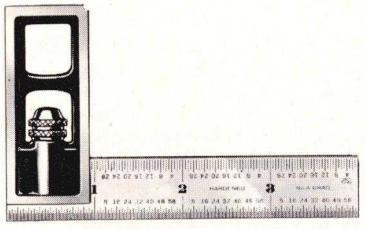


MACHINISTS CLAMPS

Designed for maximum strength, rigidity, and parallel clamping. Deep case hardened steel. Screw heads drilled to allow use of pin for tightening.

NO.	OPENING	JAW LGTH.	SHPG. WT., LBS.
CM-32	1″	1¾″	.18
CM-56	1⅝″	2¾″	.34
CM-80	2″	3½″	.54

Packaged two per box.

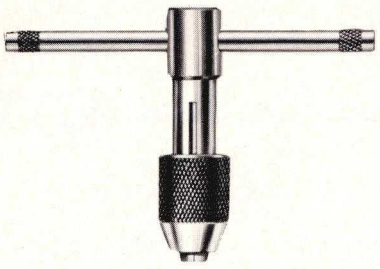


MACHINISTS DOUBLE SQUARES

Precision ground cast hard gray iron. Full hardened and tempered steel blade with etched graduations. Used as double square for checking inside and outside squareness. Can be used as a parallel.

NO.	BLADE	GRAD.	SHPG. WT., LBS.
SM-444	4″	#4	.25
SM-446	4″	#16	.25

Packaged one per box.



ADJUSTABLE T-HANDLE TAP WRENCHES

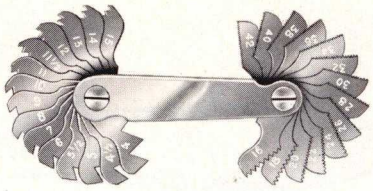
Sliding T-handle facilitates usage, and allows use of greater pressure. Used for holding taps, drills, reamers, and other small tools which are turned by hand. Chuck jaws and shell hardened for normal use. Chuck head centered to allow use on lathe centers or vertical drilling machines as work starter.

NO.	CAPACITY	SHPG. WT., LBS.
WT-3T	3/32" to 3/16"	.14
WT-6T	3/16" to 9/32"	.25
WT-9T	9/32" to 1/2"	.42

Packaged six per box.

THREAD GAGES

Compact gages for determining either inside or outside threads per inch according to V, Unified, American National and U.S. Standard — 60 degree threads.



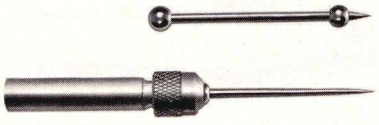
NO. GT-442 THREAD GAGE

30 pitches; 4 through 42: 4, 4½, 5, 5½, 6, 7, 8, 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 38, 40, 42. With 11½ and 27 pipe thread pitches.

NO. GT-940 THREAD GAGE

22 pitches; 9 through 40: 9, 10, 11, 11½, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40. With 11½ and 27 pipe thread pitches.

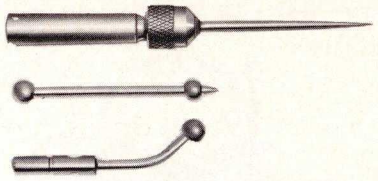
Shipping weight: .12 lb.
Packaged one per box.



NO. CF-1 CENTER FINDER OR WIGGLER

A tool for locating centers or positioning fixtures in tools such as a jig borer. Comes with one extra point; ball end, which is .250 inches for use in centering small holes. Tension adjusted by knurled shell.

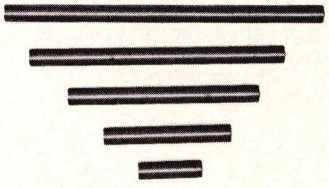
Shipping weight: .12 lb.
Packaged one per box.



NO. CF-2 CENTER FINDER OR WIGGLER

A tool for locating centers or positioning fixtures in tools such as a jig borer. Comes with one extra point; ball end, which is .250 inches for use in centering small holes and one additional point; an offset indicator holer. Tension adjusted by knurled shell.

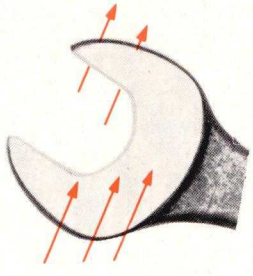
Shipping weight: .12 lb.
Packaged one per box.



STANDARDS

NO.	DESCRIPTION	WT., LBS.
STG-1	1" Standard	.01
STG-2	2" Standard	.02
STG-3	3" Standard	.04
STG-4	4" Standard	.06
STG-5	5" Standard	.08
ATG-15	Standards Set, 1"-5"	.30

HOW QUALITY IS BUILT INTO PROTO TOOLS

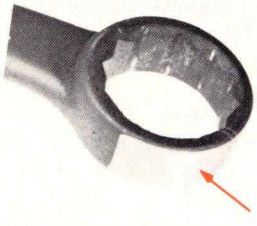


11. DOUBLE DISCING OF OPEN END FLATS

This is performed by placing the wrench head between two grinding wheels preset to tolerances. This grinding removes excess material, sizes head to required thickness, and applies the semi-finish grind all in one operation.

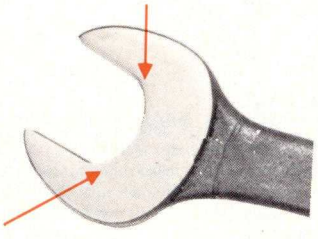
12. SCALE-FREE HEAT TREAT

The most modern equipment and methods are used to **bright harden** and temper wrench. (Advantages: no scale, no decarburization, and uniform hardness with minimum distortion.)



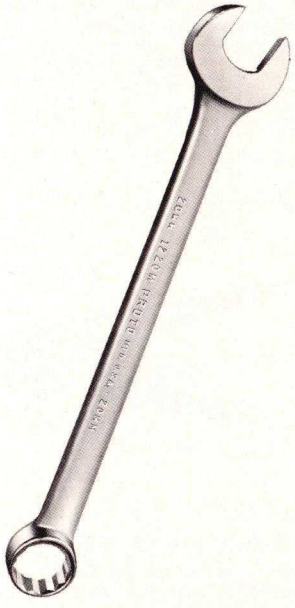
13. BUFF-POLISH OUTER WALLS OF BOX HEADS

Mirror-like hand finish is applied to the outer walls of wrench box heads, using grit polish belt and grease compound. (Benefits: uniformly rounded surfaces to ease work in constricted areas, wrenches that are easy to keep clean; truly beautiful tools.)



14. BUFF-POLISH OPEN END HEAD FLATS

Several mechanical polishing operations, each progressively finer, produce the mirror-like buff finish which characterizes Proto wrenches.



15. NICKEL-CHROME PLATE

The final touch, to preserve the beautiful polished surfaces, is the application of heavy nickel-chrome plate. The process is thermostatically and electrically controlled through eleven individual operations to achieve the dense, tough, uniform plate on Proto wrenches.

STEEL TOOL BOXES, CHESTS AND CABINETS

PROTO boxes, chests and kits are designed with a practical on-the-job knowledge of the needs of the professional tool users. Heavy gauge steel, electrical welding, reinforced construction make them rugged, rigid and long lasting. There are models for every type of work, with drawers and trays partitioned to help you find the right tool without wasting time. Baked red finish is durable and good looking.

"TOOLMOBILE"® MOBILE TOOL CABINETS FEATURING INTERCHANGEABLE DRAWERS

You'll be mighty proud when you own a gleaming sturdy "Toolmobile"—true mark of a professional tool user. Saving hours by taking needed tools on the job, and preventing tool losses, a "Toolmobile" soon pays for itself. Biggest feature is the interchangeability of drawers, which makes every "Toolmobile" a custom-built cabinet for its owner. Easy-to-move drawer runners, that fit into notches spaced every 2" from top to bottom, permit any of three basic sizes of drawers to be arranged in many combinations.

MORE BIG "TOOLMOBILE" FEATURES

Ruggedly constructed of heavy-gauge welded steel. Critical points strongly reinforced. Round corners, extra heavy channels across bottom, double side walls, hemmed drawer edges and midfront stiffener assure rigidity and proper drawer alignment.

Drawers have outside depths of 2", 4" and 6" to permit various arrangements in the 2"-spaced drawer runner notches. Bottom compartment is 12" deep, which allows also for interchanging drawers.

Four-roller drawers move at fingers touch. Double-supported roller axles take heavy load.

Semi-soft, tough rubber, 5" casters on husky ball-bearing swivel plates—each held by four bolts—roll easily and quitly, and reduce tool jarring.

Two casters have handy foot-operated brakes.

Single-lock front closes entire cabinet. Folds and slides outs of way under top when locked.

Rail around three sides of top keeps tools from rolling off and holds socket wrench racks.

Two 15" handles make cabinet easy to maneuver.

Finish is lustrous red, with smart chrome trim.

9968

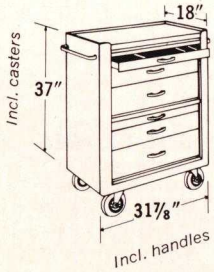
NO.	DESCRIPTION	NO. 9968 TOOL-MOBILE® WEIGHT 112 LBS.	NO 9968C TOOL-MOBILE® WEIGHT 138.56 LBS.	NO. 9968D TOOL-MOBILE® WEIGHT 154.6 LBS.
Basic Cabinet 9968	Basic Cabinet with 17⅝" x 27⅝" Masonite top, drop front, lock, two keys, four casters and two handles. Overall dimensions 31⅞" (incl. handles) x 18" x 37" high (incl. casters)	1	1	1
9968-1*	Shallow Drawer and Runners 21 15/16" x 16⅛" x 1 3/32" deep (inside) Wt. 9.5 Lbs. Has perforated sections which can be punched out to form holes for drawer divider bolts	1	1	1
9968-2*	Medium Drawer and Runners 21 15/16" x 16⅛" x 2¾" deep (inside) Wt. 11.5 Lbs. Has "punch out" bolt holes and reinforced bottom	1	1	1
9968-3*	Deep Drawer and Runners 21 15/16" x 16⅛" x 4¾" deep (inside) Wt. 13.5 Lbs. Has "punch out" bolt holes and reinforced bottom		1	2
9968-4*	Drawer Divider Set, Wt. 1.6 Lbs. Has two slotted sides and four partitions which form various compartments	1	1	1
9968-6*	Door for Bottom section, Wt. 5.25 Lbs.		1	

9968C is comprised of 9968 plus the additional drawers, bottom door.

9968D is comprised of 9968 plus the additional drawers.

*May be ordered separately.

Single Lock Drop-front Closes Entire Cabinet



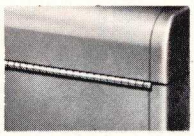
Big rubber casters roll easily over electric cords, uneven floors.

9968C

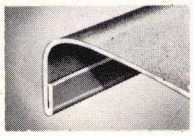
9968 D

STEEL TOOL BOXES, CHESTS AND CABINETS

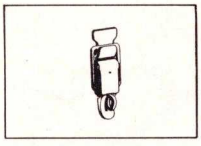
PROTO TOOL BOXES FEATURE:



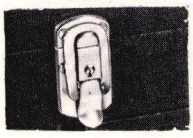
FULL LENGTH PIANO TYPE HINGES spot welded to cover and body, are durable, and make covers fit Proto boxes properly.



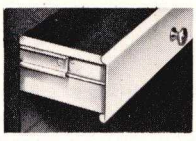
HEMMED AND WELDED EDGES on covers assure straight and true fit over lips, locks and catches.



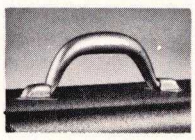
HASPS AND STAPLES are designed right for each type of box. Heavy duty chests have this strong leverage steel loop, hook and staple welded on.



LOCKS AND CATCHES are heavy, nickel plated, accurately fitted, and riveted securely.



EASY-PULL DRAWERS with compound suspension slides work smoothly regardless of weight of tools. Safety stops prevent spilling. Drawers can be removed for cleaning.



STRONG, COMFORTABLE HANDLES are shaped to the hand. They'll never pinch or cut.

ALL UNITS INTERCHANGEABLE — — ANY CHEST WITH ANY CABINET

Companion to the all new Proto mechanic's chest are 3 new rollaways. Designed for the master mechanic who needs mobile tool storage. Heavy duty construction, reinforced throughout. All electrically welded. Your choice of drawer arrangements, with ample storage compartment. Hide-a-way panel locks along with drawers providing maximum protection for valuable tools. 4" true tracking casters. 2 fixed, 2 swivel. Full stop easy slide drawer suspensions, removable for cleaning. Finished in two-toned baked enamel rocket red and mechanics gray. Weight: 9959 —100 lbs., 9960—104 lbs., 9961—109 lbs.

NO. 9957 ROLLER CABINET

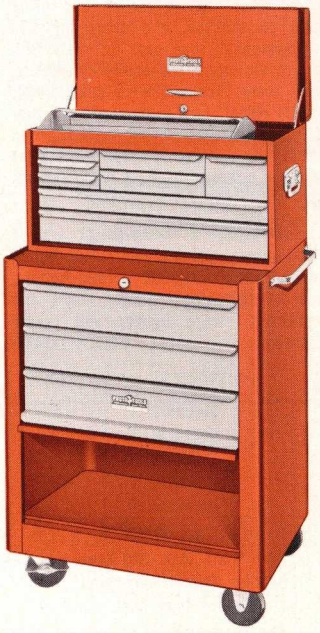
Convenient roller cabinet with three drawers and generous storage compartment. When panel is closed all drawers are covered. When open, panel slides out of the way yet is permanently attached to cabinet. Four heavy-duty casters, two swivel with brake lock and two rigid. Heavy plated drawer pulls and side handle. Cylinder-type key change lock. Drawer suspensions are sturdy and free sliding. Finished in "rocket red" baked enamel. Weight: 75 lbs.

NO.	DIMENSIONS			
	PART	LENGTH	WIDTH	HEIGHT
9957	Cabinet overall	26⅜"	18"	32½"
	3 drawers	21"	16"	3⅝"
	Bottom bin	26⅜"	18"	11"

NO. 9958

Designed for the master mechanic who wants his tools at his fingertips. Double hinged single-action lock-front and lid folds back out of the way. Big top till has compartments for small tools and sockets. Tote tray supplied with chest. Six easy pull compound-slide drawers have safety stops to prevent spilling but can be removed to clean. Strong cylinder type key lock. Finished in red baked enamel. Heavy duty chest handles on each end. Weight: 54½ lbs.

PART	DIMENSIONS		
	LENGTH	WIDTH	HEIGHT
Chest closed	26"	12"	14⅜"
Tote tray	19 5/16"	7⅞"	1¾"
Top tool till	25⅞"	11⅜"	2 1/16"
3 drawers	10 3/16"	7¼"	1⅝"
1 drawer	23¾"	10 3/16"	1⅝"
1 drawer	23¾"	10 3/16"	1⅝"
1 drawer	23¾"	10 3/16"	3¼"



NO. 9959 ROLLER CABINET WITH NO. 9962 TOOL CHEST

NO. 9959 3 DRAWER WITH STORAGE AREA

	LGTH.	WID.	HGT.
Overall	26⅜"	18"	32½"
3 drawers,	21¼"	17"	4"
Storage compartment	22¼"	17"	10"

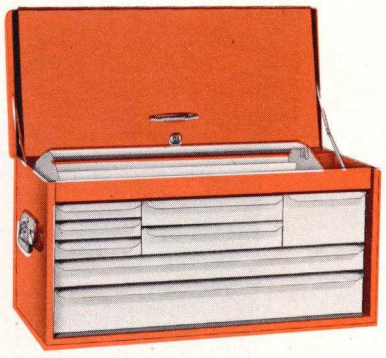
NO. 9960
4 DRAWER WITH STORAGE AREA

	LGTH.	WID.	HGT.
Overall	26 3/8"	18"	32 1/2"
2 drawers,	21 1/4"	17"	1 3/4"
2 drawers,	21 1/4"	17"	4"
Storage compartment	22 1/4"	17"	10"

NO. 9961
5 DRAWER WITH STORAGE AREA

	LGTH.	WID.	HGT.
Overall	26 3/8"	18"	32 1/2"
4 drawers,	21 1/4"	17"	1 3/4"
1 drawer,	21 1/4"	17"	4"
Storage compartment	22 1/4"	17"	10"

Two all new mechanic's chests designed to give maximum protection for your valuable tools—convenient storage in your choice of 8 or 10 drawer units. Heavily reinforced throughout. Double action locking front folds back for easy access to top till. Full length drawer pulls open from any position. Electrically welded throughout including drawer dividers. No sag drawers. Easy pull drawer suspensions with stops, can be removed for cleaning. Cylinder-type lock with 2 keys. Finished in attractive two-tone enamel rocket red/mechanic's gray, baked on for lasting durability. Weight: 9962—69 lbs., 9963—71 lbs.

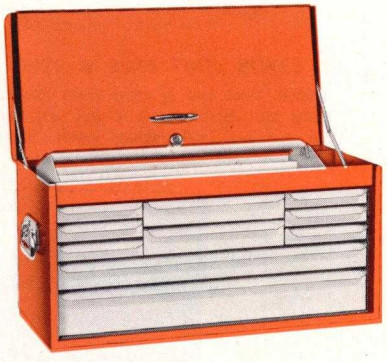


NO. 9962
8 DRAWER MECHANIC'S TOOL CHEST

Designed for midget and large tools, this versatile chest is popular with mechanics requiring tools for all types of work. 8 drawers: four small, two medium and two large. Strong tumbler lock secures tool chest. Can be used on top of toolmobile.

DIMENSIONS

	LGTH.	WID.	HGT.
Overall	26"	12"	14 1/2"
3 drawers,	5 7/8"	10 1/4"	1"
1 drawer,	5 7/8"	10 1/4"	4"
1 drawer,	23 3/4"	10 1/4"	3 1/16"
2 drawers,	10 3/16"	10 1/4"	1 3/4"
1 drawer,	23 3/4"	10 1/4"	1 3/4"



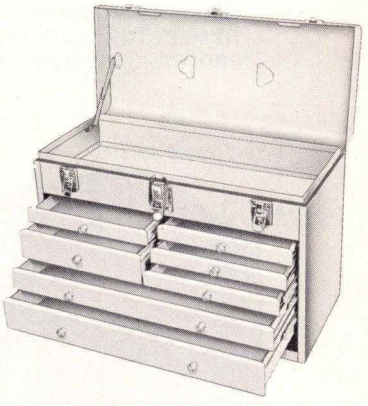
NO. 9963 10 DRAWER
MECHANIC'S TOOL CHEST

This top quality chest has everything professional mechanics require for proper storing of master sets of tools and carrying of selected tools. Lid covers chest snugly. Strong tumbler lock. Can be used on top of toolmobile.

DIMENSIONS

	LGTH.	WID.	HGT.
Overall	26"	12"	14 1/2"
6 drawers,	5 7/8"	10 1/4"	1"
1 drawer,	10 3/16"	10 1/4"	1 3/4"
2 drawers,	10 3/16"	10 1/4"	1 3/4"
1 drawer,	23 3/4"	10 1/4"	3 3/16"
Tote tray	19"	7 3/4"	1 1/2"

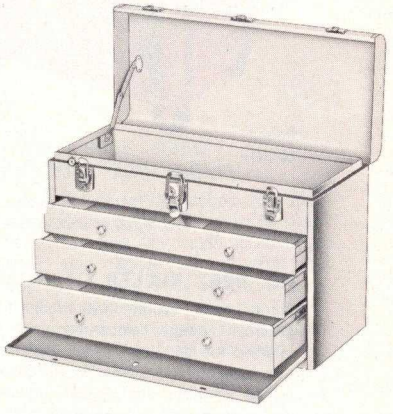
standard equipment.



NO. 9964 TOOLMAKER'S KIT

A favorite with machinists and tool and die makers. Features seven drawers of various sizes properly designed and lined with durable green felt to protect precision tools, with big tool till on top. Easy-pull suspension slides have stops to prevent drawers spilling. Drawers can be removed for cleaning. Front panel is stored beneath drawers. Full length piano hinged cover. Wrinkled tobacco brown baked enamel finish. With contrasting drawer fronts. Heavy duty nickel plated key change lock and catches. Weight: 31 1/2 lbs.

NO.	DIMENSIONS			
	PART	LGTH.	WID.	HGT.
9964	Chest closed	20 1/8"	8 1/2"	13 1/2"
	Top tool till	20"	8 1/2"	2 7/8"
	4 drawers	8 1/2"	7 1/8"	1"
	1 drawer	8 1/2"	7 1/8"	1 7/8"
	1 drawer	18 1/8"	7 1/8"	1 1/2"
	1 drawer	18 1/8"	7 1/8"	2 1/4"



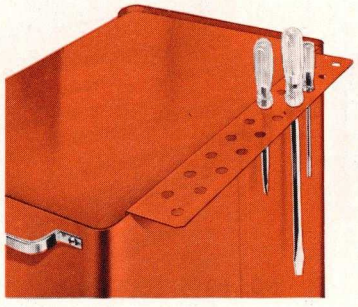
NO. 9965
MACHINIST'S CHEST

Same as 9964 except three large drawers have been designed for the machinist who wants more space for larger tools. Weight: 26 1/2 lbs.

NO.	DIMENSIONS			
	PART	LGTH.	WID.	HGT.
9965	Chest closed	20 1/8"	8 1/2"	13 1/2"
	Top tool till	20"	8 1/2"	2 7/8"
	1 drawer	18 1/8"	7 1/8"	3/4"
	1 drawer	18 1/8"	7 1/8"	2 1/8"
	1 drawer	18 1/8"	7 1/8"	3"

STEEL TOOL BOXES, CHESTS AND CABINETS

VERSATILE MODULAR UNITS TO MEET THE NEEDS OF ALL PROFESSIONAL MECHANICS



Special tool or valve holder fits on back of Roller Cabinet — on No. 9967 only.

NO. 9967 ROLLER CABINET

Sturdy roller cabinet with four drawers and generous storage compartment with shelf. Reinforced top and front panel. Panel closing bottom compartment slides out of the way under bottom drawer. Four heavy-duty casters, 4" dia., two swivel (with brakes) and two fixed. Chrome plated drawer pulls and side handles. Drawer suspensions are sturdy and free-sliding. Finished in bright red baked enamel. Wt. 124 lbs.

NO.	DIMENSIONS			
	PART	LGTH.	WID.	HGT.
9967	Cabinet overall	26½"	18½"	32½"
	2-s drawers	21⅛"	17¾"	2"
	1 med. drawer	21⅛"	17¾"	3"
	1 l. drawer	21⅛"	17¾"	4½"
	1 shelf	26¼"	12"	—

No. 9967 Roller Cabinet with No. 9997 Master Tool Chest

No. 9967 Roller Cabinet with No. 9991 Heavy Duty Tool Chest

NO. 9991 HEAVY DUTY TOOL CHEST

Designed for master sets, and to fit on Toolmobile®, this big chest has tote tray, compartmented top section, compartmented top drawer, extra large bottom drawer. Reinforced cover has 2 piano hinges, drop-front panel enclosing drawers, cabinet-type lock, keys. Durable red finish.

LENGTH	WIDTH	HEIGHT	WT., LBS.
26"	12"	11 11/16"	34

NO. 9997 MASTER TOOL CHEST

Fits top of Toolmobile®.

This top quality chest has everything professional mechanics require for proper storing of master sets of tools and carrying of selected tools to their work. It is roomy, rugged, efficient, good looking. Top section is divided into 3 compartments, one holding a removable tote tray with 2 socket compartments, big tool space and rigid non-tilt handle. 6 gliding, no-spill drawers: 3 small ones for precision tools, 1 full width shallow drawer with 2 compartments, 1 medium depth with 3 compartments, 1 deep drawer with 2 compartments, all partitions sturdily welded. Lid overlaps chest with snug fit. Front cover plate is hinged to swing back inside lid when chest is open, cover the drawers when closed. Strong tumbler lock secures the chest.

PART	DIMENSIONS			WT., LBS.
	LENGTH	WIDTH	HEIGHT	
Chest overall	26"	12"	14⅜"	65
Tote tray, 3-compartment	20¾"	8⅛"	1 9/16"	
3 drawers, each	7¼"	10 3/16"	1"	
1 drawer	23¾"	10 3/16"	1"	
1 drawer	23¾"	10 3/16"	1⅝"	
1 drawer	23¾"	10 3/16"	3¼"	

No. 9970

NOS. 9951 & 9952
HIP-ROOF MECHANIC'S CASE

Cases open wide for quick access to tools and parts. Sturdily supported cantilever trays are properly compartmented for small tools, sockets and accessories. Ample bottom compartment for large tools. Double wall reinforced case ends, full length piano hinges on both sides, rigid construction give these cases great strength. Heavy duty hasp and staple, comfortable formed steel handle, "rocket red" finish. Weight: No. 9951, 18¾ lbs. - No. 9952 21¼ lbs.

NO.	DIMENSIONS		
	LENGTH	WIDTH	HEIGHT
	CASE CLOSED		
9951	18″	10″	13″
9952	22″	10″	13″
	CANTILEVER TRAYS		
9951	16½″	4⅝″	1½″
9952	20⅝″	4½″	1½″
	BOTTOM COMPARTMENT		
9951	16½″	10″	5⅞″
9952	20⅝″	10″	5⅞″

NO. 100 HR HIP ROOF TOOL BOX

Popular heavy gauge steel box easily holding socket sets up to ¾″ drive. Removable tote tray has 13½″ socket compartment and full length 2″ compartment. 2-piece lid has full length piano hinges. Handles hold box shut while carrying. Durable red finish. 3-compartment tote tray.

BOX OVERALL

NO.	LENGTH	WIDTH	HEIGHT	WT., LBS.
100 HR	21³⁄₁₆″	8⁷⁄₁₆″	7⅛″	11.9

No. 9971

NOS. 9970 & 9971
HIP ROOF TOOL BOXES

Hold amazing number of tools. Heavy gauge steel box. 1-piece lid with full length piano hinges overlaps top. 2 lever-type fasteners, hinge hasp, comfortable grip handle; Tote tray lifts out. Durable red finish. Two sizes.

BOX OVERALL

NO.	LENGTH	WIDTH	HEIGHT	WT., LBS.
9971	19″	7³²⁄₃₂″	9⅛″	10.4
9970	19⁹⁄₁₆″	5⅞″	5⅞″	7.7

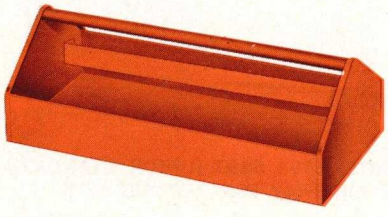
NOS. 9972 & 9975 TOOL BOXES

Popular with many types of tool users. Removable tote tray has 3 compartments, big space underneath. Heavy gauge steel. Lid has full length piano hinge, 2 lever-type fasteners, padlock hasp. Durable red finish.

BOX OVERALL

NO.	LENGTH	WIDTH	HEIGHT	WT., LBS.
9972	23³²⁄₃₂″	8½″	9½″	13.6
9975	20¹⁄₃₂″	8½″	9½″	11.

9972—2-compartment tote tray
9975—2-compartment tote tray



NO. 9953
MECHANIC'S TOTE TRAY

Edges of tray and socket partition are hemmed and welded for strength and rigidity. Designed and built to last. Finish is "rocket red" baked enamel. Weight 3¾ lbs.

NO. 9953
MECHANIC'S TOTE TRAY (Cont.)

NO.	DIMENSIONS		
	LENGTH	WIDTH	HEIGHT
	OVERALL		
9953	19″	9⅛″	3″
	TAPERED SOCKET TRAY		
9953	19″	1⅛″ to 1¾″	1⁵⁄₁₆″

NOS. 9954, 9955, 9956
ALL PURPOSE TOOL BOXES

Removable tote tray and big bottom tool space make these boxes useful for many jobs and home work. Cover has full length piano hinge, combination hasp, staple and drawbolt, big comfortable steel handle. Cover edge is hemmed, welded, and fits properly over rigid box lip with welded wrap-around corner ears. Baked enamel finish. Weight: No. 9954, 6 lbs. - No. 9955, 6½ lbs. - No. 9956, 7¾ lbs.

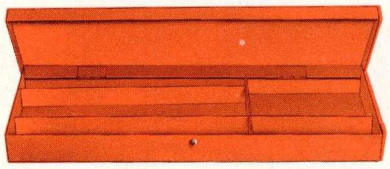
No. 9956 has cantilever tray which raises with cover. Tray also has four compartments as shown in photo above.

NO.	DIMENSIONS		
	LENGTH	WIDTH	HEIGHT
	CASE CLOSED		
9954	16″	7″	7″
9955	19″	7″	7″
9956	19″	7″	7″
	TRAY		
9954	15⅜″	4½″	1½″
9955	18⅜″	4½″	1½″
9956	18¼″	5½″	1½″

PROTO PROFESSIONAL TOOLS

NO. 4795
MIDGET TOOL BOX

Made for 1/4" drive midget sockets, handles and attachments. Keeps smaller tools in order with separate compartment for sockets.



NO. 4796
MIDGET TOOL BOX

For 1/4" drive sockets. Has 5 compartments for regular and deep sockets, plus attachments. Resistance welded heavy gauge steel. Durable red finish.

BOX OVERALL

NO.	LENGTH	WIDTH	HEIGHT	WT., LBS.
4795	6 3/4"	3"	1 1/4"	.52
4796	12"	3 1/2"	1 1/8"	1.16

NO. 5695
HEAVY DUTY TOOL BOX

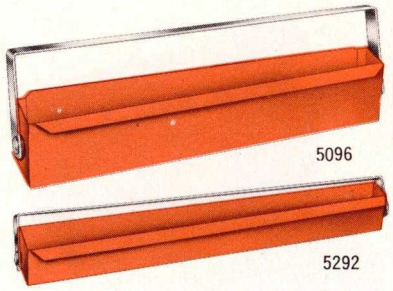
Made for 3/4" heavy-duty sockets, handles and attachments. Construction throughout is extra heavy. Has five convenient compartments. Cover is held shut by two spring catches and a padlock hasp. Handle folds out of way when not in use.

NO. 5696
HEAVY DUTY TOOL BOX

Will hold full 3/4" socket line and attachments.

BOX OVERALL

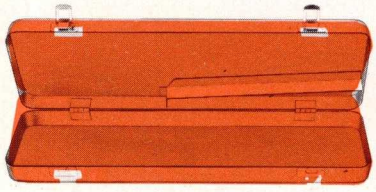
NO.	LENGTH	WIDTH	HEIGHT	WT., LBS.
5695	22 1/2"	8"	3 3/4"	9.0
5696	23 3/16"	9"	4"	19.5



NOS. 5096, 5292 JUNIOR TOOL BOXES FOR 3/8" SOCKETS

Holds an assortment of 3/8" drive sockets and several attachments.

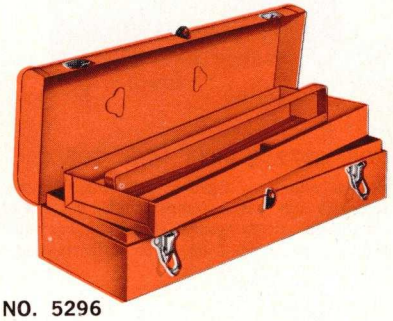
NO.	LGTH.	WIDTH	HGHT.	WT.LB.
5096	8 1/16"	13/16"-1 1/4"	1 1/2"	.48
5292	9 5/8"	11/16"-1 3/16"	1"	.40



NO. 5295 TOOL BOX

Made for 3/8" drive sockets, handles and attachments. Dieformed one piece construction for added strength. Has reinforcing flanges, rounded corners and spring hasp.

NO.	LENGTH	WIDTH	HEIGHT	WT. LB.
5295	17 1/2"	5 1/4"	2"	1.70



NO. 5296

Heavy gauge steel. Has tote tray with 9 compartments for smaller items. Full length piano hinge. Hasp for padlock. Sturdy metal grip. Durable red finish.

NO.	LENGTH	WIDTH	HGHT.	WT. LB.
5296	19"	7"	7 1/4"	6.50

NOS. 5393, 5493 JUNIOR STANDARD TOOL TRAY FOR 1/2" SOCKETS

Holds an assortment of 1/2" drive standard sockets, plus several handles and attachments.

NO.	LGTH.	WIDTH	HGHT.	WT.LB.
5393	12 3/4"	7/8"-1 5/8"	1 13/16"	.80
5493	17 1/4"	15/16"-1 7/8"	1 1/8"	.82

NO.5496 HIP ROOF TOOL BOX

Smaller hip roof box with ample room for long handled tools. Two compartments for smaller tools. Full-length piano hinge attaches cover to box. Metal carrying handle; two snap catches; center hasp for padlock. 22 gauge steel. Durable red finish. Individually boxed.

NO.	LENGTH	WIDTH	HGHT.	WT., LBS.
5496	18 1/2"	7"	3 5/8"	3.25

NO. 9974 TRAY

Durable handle-lock tray, holds six 1/2" square sockets.

NO.	LGTH.	WIDTH	HGHT.	WT., LBS.
9974	6 5/8"	1 1/8"-1 3/8"	1 1/8"	.30

NO. 5894
EXTRA HEAVY DUTY TOOL BOX

Made for 1" square drive extra heavy duty and 3/4" drive heavy duty sockets, and attachments. Made of heavy gauge throughout — welded, riveted and strongly reinforced.

NO.	LENGTH	WIDTH	HGHT.	WT., LBS.
5894	30"	5"	8 3/16"	13.6

NO. 5895
EXTRA HEAVY DUTY TOOL BOX

Will hold full 1" socket line and attachments.

NO.	LENGTH	WIDTH	HGHT.	WT., LBS.
5895	30 3/8"	12 9/16"	5 9/16"	37.

TOOL KITS

2402

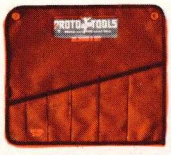
2403

2404

2404F

*2405

2406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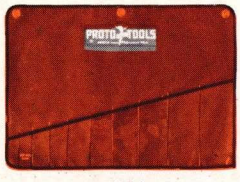
2409

2410

2411

2412

*2413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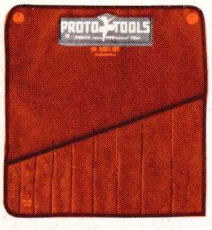
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2420

2418

2419

KITS FOR TOOL SETS

Finest obtainable for storing and carrying tools. Vinyl plastic impregnation offers many advantages. It is noted for long wear, is flexible, won't crack or peel, is scratch and scuff proof, resists grease and oil, and is easy to clean with soap and water. The kits are red, with blue trim. They have strongly stitched seams, heavy tie strings, two grommets for hanging, and tough, crystal clear vinyl plastic pocket covers.

2421

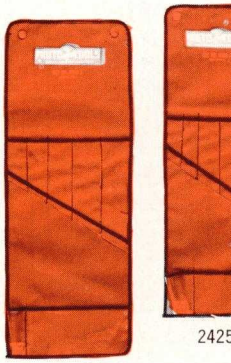
2422

2423

DESCRIPTION OF KITS

**For Metric Kits add "M" to asterisked number*

NO.	FOR SET NO.	WIDTH	DEPTH	POCKETS	WT., LBS.
2402	2	12⅞"	7½"	12	.09
2403	47A	7⅜"	8¼"	7	.07
*2404	1200H	11⅜"	10½"	7	.14
2404F	3700A	11⅜"	10½"	7	.14
*2405	1100K	10"	15"	5	.17
*2406	3000H	21¼"	15½"	10	.35
*2407	30000R	10¼"	8¾"	6	.10
*2409	3000N	9½"	11¾"	5	.12
2410	3300A	9⅜"	5¾"	9	.06
2411	3	5 5/16"	8⅛"	5	.04
2412	3400G	6¾"	11½"	4	.09
*2413	1200F	25"	18½"	15	.58
*2414	30000A	19"	13⅛"	10	.28
2415	1200L	12¾"	13⅛"	9	.18
2416	3200D	9⅛"	5¾"	9	.06
2417	3200B	5 5/16"	5¾"	5	.04
*2418	1100M	18⅞"	18½"	10	.50
2419	9200C	5⅜"	17⅝"	7	.14
2420	3200C	12"	8"	13	.10
2421	140A	4½"	7¼"	1	.04
2422	1200E	7¼"	6"	8	.05
2423	2300A	6 21/32"	8⅝"	4	.07
2424	9700A	8"	21½"	5	.18
2425	9800A	6¾"	19¾"	5	.16
2426	9600A	6"	15½"	5	.10
2427	9200M	4"	4"	5	.01
2428	9600B	6⅞"	19 13/16"	7	.16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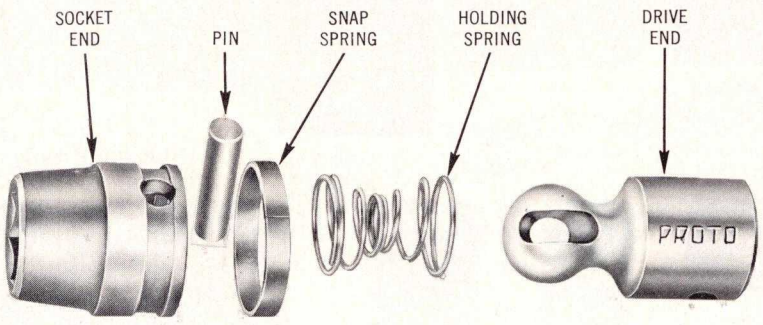


PARTS
LISTED NUMERICALLY BY TOOL NUMBER

BALL-TYPE POWER UNIVERSAL SOCKET PARTS

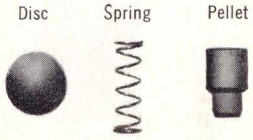
SOCKET NO.	DRIVE SIZE	SOCKET END PART NO.	DRIVE END PART NO.	PIN PART NO	HOLDING SPRING PART NO.	SNAP SPRING PART NO.
7273	3/8"	7273A	7270PF	7270PN	7270SP	7270SR
7274	3/8"	7274A	7270PF	7270PN	7270SP	7270SR
7275	3/8"	7275A	7270PF	7270PN	7270SP	7270SR
7276	3/8"	7276A	7270PF	7270PN	7270SP	7270SR
7277	3/8"	7277A	7270PF	7270PN	7270SP	7270SR
7474	1/2"	7474A	7470PF	7470PN	7470SP	7470SR
7475	1/2"	7475A	7470PF	7470PN	7470SP	7470SR
7476	1/2"	7476A	7470PF	7470PN	7470SP	7470SR
7477	1/2"	7477A	7470PF	7470PN	7470SP	7470SR
7478	1/2"	7478A	7470PF	7470PN	7470SP	7470SR
7479	1/2"	7479A	7470PF	7470PN	7470SP	7470SR
7480	1/2"	7480A	7470PF	7470PN	7470SP	7470SR

BALL-TYPE POWER UNIVERSAL JOINT PARTS

JOINT NO.	DRIVE SIZE	FEMALE END PART NO.	MALE END PART NO.	PIN PART NO.	DISC. PART NO.
7270	3/8"	7270PF	7270PM	7270PN	7100 3/8 DD
7470	1/2"	7470PF	7470PM	7470PN	7100 1/2 DD
7670	5/8"	7670PF	7670 PM	7670PN	7100 5/8 DD

JOINT NO.	DRIVE SIZE	PELLET PART NO.	PELLET SPRING PART NO.	HOLDING SPRING PART NO.	SNAP RING PART NO.
7270	3/8"	7100 3/8 P	7100 3/8 S	7270SP	7270SR
7470	1/2"	7100 1/2 P	7100 1/2 S	7470SP	7470SR
7670	5/8"	7100 5/8 P	7100 5/8 S	7670SP	7670SR

POWER EXTENSION SOCKET-HOLDING ATTACHMENT PARTS
Fraction in part no. indicates square drive size.



PART NO.	PART
7100 1/4 DD	Disc
7100 1/4 P	Pellet
7100 1/4 S	Spring
7100 3/8 DD	Disc
7100 3/8 P	Pellet
7100 3/8 S	Spring
7100 1/2 DD	Disc
7100 1/2 P	Pellet
7100 1/2 S	Spring
7100 5/8 DD	Disc
7100 5/8 P	Pellet
7100 5/8 S	Spring

PLIER PARTS

PLIER NO.	BOLT & NUT NO.
201	240-BN
202	202-BN
203	202-BN
230	235-BN
231	231-50
234	*234-N
235	235-BN
236	202-BN
238	257-BN
239	202-BN
240	240-BN
241	241-B
242	243-BN
243	243-BN
244	244-BN
245	245-BN
246	257-BN
248S	248-SBN
248P	248-SBN
252	202-BN
257	257-BN
275	240-BN
276	202-BN
278	202-BN
280	280-BN

PLIER NO.	SPRING NO.
205 Series	285S-S
211S	285S-S
224	285S-S
250	251-S
251	251-S
282-287BS	285S-S
396	396T

*Nut only.

C-CLAMPS
100 GS C-CLAMP PARTS

NO.	SPINDLE & HANDLE	PERMA-PAD & RING
102GS	102A	402P
103GS	103A	103P
104GS	104A	404P
106GS	104A	404P
108GS	104A	404P
110GS	104A	404P
112GS	104A	404P

REGULAR DUTY

402	402-B	402-P
403	403-B	402-P
404	404-B	404-P
406	406-B	404-P
408	406-B	404-P
410	410-B	404-P
412	412-B	404-P

REGULAR DUTY

402-S	402-SB	402-P
403-S	403-SB	402-P
404-S	404-SB	404-P
406-S	406-SB	404-P
408-S	406-SB	404-P
410-S	410-SB	404-P
412-S	412-SB	404-P

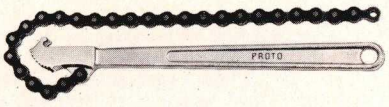
EXTRA DEEP THROAT CLAMPS

424	404-B	404-P
426	406-B	404-P
428	406-B	404-P

EXTRA DEEP THROAT CLAMPS WITH SHIELD

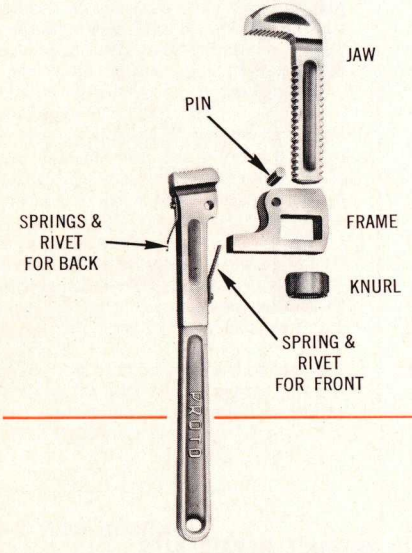
424-S	404-CB	404-CP
426-S	406-CB	404-CP
428-S	406-CB	404-CP

PROTO PROfessional TOols



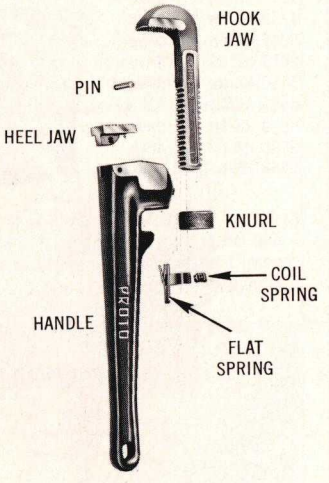
CHAIN WRENCH PARTS

WRENCH NO.	CHAIN PART NO.	RIVET PART NO.
801	801C	801R



NORMAL DUTY PIPE WRENCH PARTS

WRENCH NO.	HANDLE & SPRINGS PART NO.	JAW PART NO.	KNURL PART NO.	PIN FOR FRAME PART NO.	FRAME & PIN PART NO.	SPRINGS & RIVET FOR BACK PART NO.	SPRING & RIVET FOR FRONT PART NO.
806	806H	806J	806K	806P	806PF	—	806SF
808	808H	808J	808K	808P	808PF	—	808SF
810	810H	810J	810K	810P	810PF	810SB	810SF
814	814H	814J	814K	814P	814PF	814SB	814SF
818	818H	818J	818K	818P	818PF	818SB	818SF
824	824H	824J	824K	824P	824PF	824SB	824SF

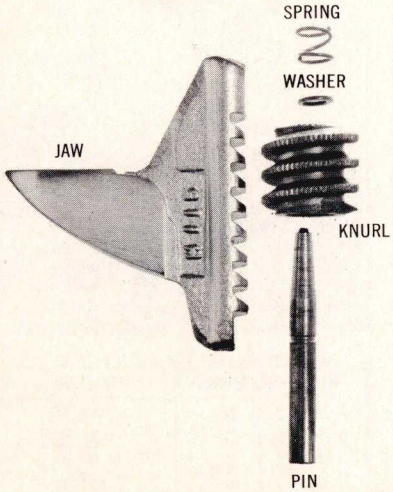


HEAVY DUTY PIPE WRENCH PARTS

WRENCH NO.	HANDLE, HEEL JAW & PIN ASSEMBLY PART NO.	HOOK JAW PART NO.	HEEL JAW & PIN PART NO.	KNURL PART NO.	FLAT SPRING PART NO.	COIL SPRING PART NO.
†806HD	806A	806B	806C	806D	806E	806G
†808HD	808A	808B	808C	808D	808E	808G
†810HD	810A	810B	810C	810D	810E	810G
†814HD	814A	814B	814C	814D	814E	814G
†818HD	818A	818B	818C	818D	818E	818G
†824HD	824A	824B	824C	824D	824E	824G
836HD	836A	836B	836C	836D	836E	—
848HD	848A	848B	848C	848D	848E	—

FORGED HEAVY DUTY PIPE WRENCH PARTS

	HANDLE ASSY	SPRING & SPRING RETAINER
814 FHD	814-60	814-64
818 FHD	818-60	818-64
824 FHD	824-60	824-64



ADJUSTABLE WRENCH PARTS

WRENCH NO.	SPLIT WASHER PART NO.	POLISHED JAW PART NO.	PLATED JAW PART NO.	PLATED KNURL PART NO.	THREADED PIN PART NO.	SPRING CYLINDER PART NO.	TAPERED PIN & SPRING† PART NO.
715	715C	—	715JP	715KC	715NC	715RC	715NRH
715L	—	—	715JP	715KLC	—	—	715NRH
715S	—	715J	—	715KC	715NC	715RC	715NRH
715SL	—	715J	—	715KLC	—	—	715NRH
716	716C	—	716JP	716KC	716NC	716RC	716NRH
716L	—	—	716JP	716KLC	—	—	716NRH
716S	—	716J	—	716KC	716NC	716RC	716NRH
716SL	—	716J	—	716KLC	—	—	716NRH
718	718C	—	718JP	718KC	718NC	718RC	718NRH
718L	—	—	718JP	718KLC	—	—	718NRH
718S	—	718J	—	718KC	718NC	718RC	718NRH
718SL	—	718J	—	718KLC	—	—	718NRH
720	720C	—	720JP	720KC	720NC	720RC	720NRH
720L	—	—	720JP	720KLC	—	—	720NRH
720S	—	720J	—	720KC	720NC	720RC	720NRH
720SL	—	720J	—	720KLC	—	—	720NRH

See page 114 for replacement parts for No. 704 through No. 712SL.

†Prices for parts in Price List: PR 101—6909

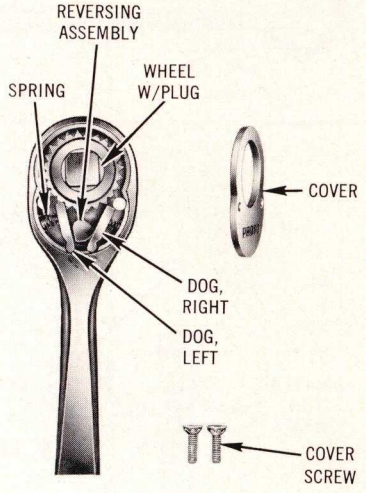
PROTO PROFESSIONAL TOOLS

NO. 4750 RATCHET

COVER CLIP	DOG	DOG BALL	DOG PIN	DOG PIN RING
PART NO.	PART NO.	PART NO.	PART NO.	PART NO.
4750C	4750D	4750DB	4750DP	4750DPR

DRIVE SIZE 1/4"

PLUG	RETAINING RING	SPRING	WHEEL FEMALE
PART NO.	PART NO.	PART NO.	PART NO.
4750G	4750RR	4750S	4750W



REVERSIBLE RATCHET PARTS

RATCHET NO.	DRIVE SIZE	COVER PART NO.	DOG, LEFT PART NO.	DOG, RIGHT PART NO.	COVER SCREW PART NO.	WEAR RING◆ OR REVRSG. ASSY. PART NO.	SPRING PART NO.	WHEEL W/PLUG PART NO.
4749	1/4"	4749C	4749DL	4749DR	4749H	4749R	4749S	4749W
5249	3/8"	5249C	5249DL	5249DR	5249H	5249R	5249S	5249W
5449	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449W
5449-14	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449-14W✓
5450	1/2"	5449C	5449DL	5449DR	5449H	5449R	5449S	5449W
5649	3/4"	5649C	5649DL	5649DR	5649H	5649R	5649S	5649W
5650	3/4"	5649C	5649DL	5649DR	5650H	5650R ◆	5649S	5650W
5848	1"	5848C	5848DL	5848DR	5848H	5848R	5848S	★
5849	1"	5848C	5848DL	5848DR	5848H	5848R	5848S	★★
5850	1"	5848C	5848DL	5848DR	5848H	5850R ◆	5848S	★★

5650-1: Spring Insert for pawl on #5650 Ratchet
*Ratchet No. 5848 Has No. 5848W Female Wheel
**Ratchets No. 5849 & 5850 Have No. 5848W Female Wheel and No. 5852 Male Plug
✓Holding attachment consists of 7100½DD, 7100½P, 7100½S, instead of Ball & Spring. See page 112.

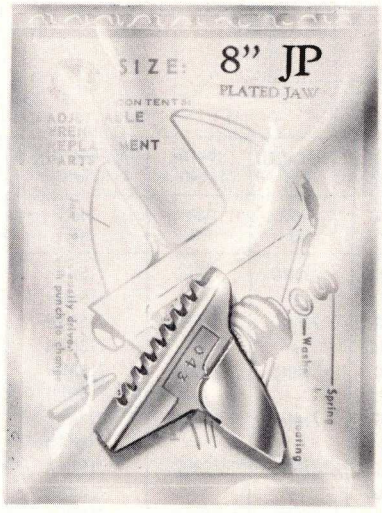
ADJUSTABLE WRENCH REPAIR KITS

The three kits described below are handy & convenient repair kits for the popular 4"-12" Adjustable and Clik-Stop® wrenches. A heavy polyethylene bag protects the spare parts. Instruction card has "exploded view" of wrench, with installation instructions on reverse side.

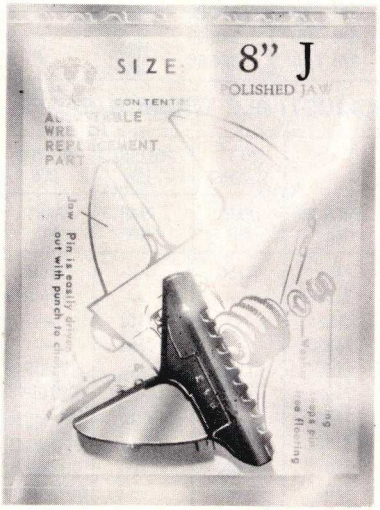
JP SERIES — Plated jaw only. Fits either standard Adjustable or automatic locking Clik-Stop wrenches. Four to twelve inch.

J SERIES — Polished jaw only. Fits either standard Adjustable or automatic locking Clik-Stop wrenches. Four to twelve inch.

KK SERIES — Contains a Golden Knurl, a C-Washer plus a Pin & Spring. This series fits either the standard Adjustable or automatic locking Clik-Stop wrenches. Four to twelve inch.



FOR WRENCH NO.	KIT NO.
704, 704L	4" JP
706, 706L	6" JP
708, 708L	8" JP
710, 710L	10" JP
712, 712L	12" JP



FOR WRENCH NO.	KIT NO.
704S, 704SL	4" J
706S, 706SL	6" J
708S, 708SL	8" J
710S, 710SL	10" J
712S, 712SL	12" J

RATCHET REPAIR KITS

4749 RK for 1/4" drive
4753 RK for 1/4" drive
5249 RK for 3/8" drive
5449 RK for 1/2" drive
5450 RK for 1/2" drive
5450 RKM for 1/2" drive
5649 RK for 3/4" drive
5650 RK for 3/4" drive
5848-49RK for 1" drive

Each "RK" Kit contains 1 cover, 2 cover screws, 1 dog left, 1 dog right, 1 reversing assembly, 2 springs, 1 wheel w/plug.

Each "RKM" Merchandiser is a card w/four RK's.

FOR WRENCH NO.	KIT NO.
704, S, L, SL	4" KK
706, S, L, SL	6" KK
708, S, L, SL	8" KK
710, S, L, SL	10" KK
712, S, L, SL	12" KK

TUNE-UP STAND/DWELL TACHOMETERS/ DWELL METERS

PROTO PROFESSIONAL TOOLS

Proto, one of the world's leading suppliers of professional tools and equipment for automotive mechanics, now offers the most advanced new line of tune-up equipment available today.

These fine instruments feature large, clear, easy-to-read D'Arsonval meters with color-coded dial faces for instant identification. All precision meters are enclosed in durable Cycolac®* cases for long service life. The streamlined cases are designed for handling ease and accurate reading from any angle, regardless of meter position.

New modern electronic technology guarantees the ultimate in modern, scientifically-designed circuitry for instantaneous performance and fail-proof reliability.

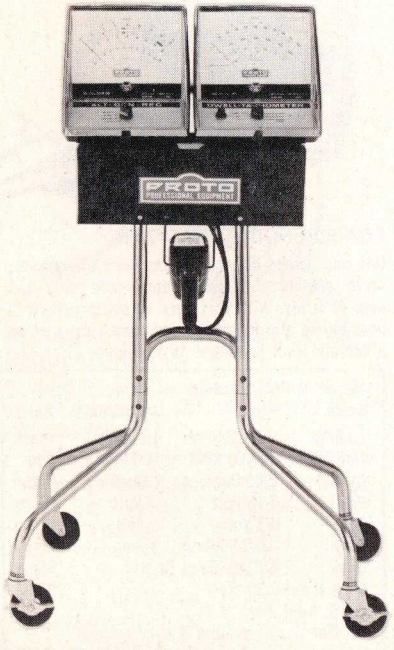
The exceptional **speed, accuracy** and **dependability** of this new Proto line makes it ideal for garages, service stations, car dealerships, fleet and marine use. Self-powered independence and full portability of all compact units make them a "must" for service calls.

Included with every unit is an expertly prepared "How-To-Use" booklet with step-by-step instructions and schematic diagrams showing you the fastest, safest and most profitable procedure for every test.

These are the most complete and compact service units on the market today and the only professional line of tune-up equipment backed by the famous Proto warranty.

TUS-1 TUNE-UP STAND

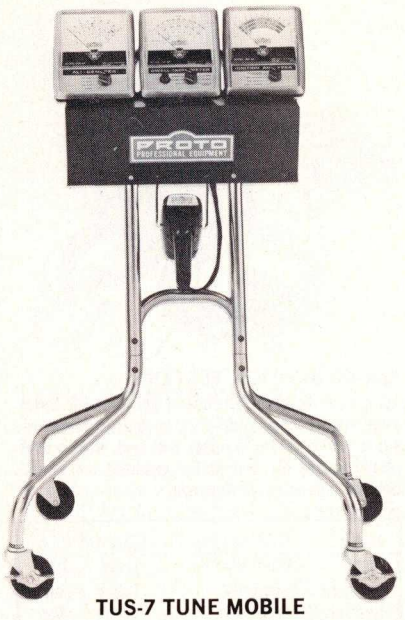
Instruments are at proper height for car and trucks. Chrome-plated full 1" tubular construction. Large 3" dia. x ¾" tread casters. Two casters have locking brakes. Pre-positioned holes simplify mounting of instruments. Wire "holster" holds Power Timing Light in handy, safe position. Hooks held electrical leads for all instruments.



TUS-5 TUNE-MOBILE

TUS-1 with AGR-80 Alternator, Generator, Regulator Tester; DT-80 Dwell Tachometer and PTL-10 Power-Timing Light.

Height of Shelf	Width at Base	Depth at Base	Dial Height	Weight (Stand only)
38"	24"	18"	44"	12.2 lbs.



TUS-7 TUNE MOBILE

TUS-1 with AGR-40 Alternator, Generator, Regulator Tester; DT-40 Dwell Tachometer; IGN-40 Ignition Tester and PTL-10 Power Timing Light.

Height of Shelf	Width at Base	Depth at Base	Dial Height	Weight (Stand only)
38"	24"	18"	42"	12.2 lbs.

Rolls right to the job for time-saving convenience. Gives any shop a professional look that attracts customers. Instruments attach easily and securely.

DT-25 DWELL TACHOMETER

A compact hand-held unit, combines the two most needed instruments, in one — for testing dwell angle, dwell variation, engine RPM and governor settings with one simple hook-up on all 6 and 12 volt ignition systems. Checks 4, 6 and 8 cylinder engines. Single set knob with "OFF" switch.

Meter — Dual Range — Size: 2½" x 2½"

Scale	8 Cyl.* Range	Increments	6 Cyl. Range	Increments	Color
RPM	0-2250	50 RPM	0-3000	100 RPM	Blk.
Dwell	0-45°	1 Degree	0-60°	2 Degrees	Red

*For 4 cyl. engine, double the 8 cyl. reading.

Meter Sensitivity: .2 M Amps.
Control: 1 Selector Switch, 1 Set Knob with "off" switch
Leads: 48" long
Clips: Red (Pos) Black (Neg)
Powered by: 2 — Size "AA" penlight bat.
Meter Accuracy: ± 2%
Shipping weight 1.91 lbs.
"How to Use" booklet included free.

D-25 DWELL METER

An essential for setting new points or resetting used points. This battery-powered unit operates on 4, 6 and 8 cylinder engines with 6 or 12 volt systems, conventional or transistorized. Provides steady and accurate reading with engine cranking or running.

Meter — Double Range — Size: 2½" x 2½"

Engine	Range	Increments	Color
6 Cyl.	0-60°	2 Degrees	Red
8 Cyl.	0-45°	1 Degree	Black
4 Cyl.		By doubling 8 cyl. reading	

Points Resistance (marking)
Meter Sensitivity: .2 M Amps
Control: 1 set Knob
Leads: 48" long
Clips: Red (Pos) Black (Neg)
Powered by: 2 — Size "AA" penlight bat.
Meter Accuracy ± 2% Shpg. Wt. 1.91 lbs.
"How to Use" booklet included free.

IGN-25 IGNITION TESTER

Checks ignition output with the "end result" method. It is much faster and more accurate than checking individual units. Tests ignition output with engine running or cranking. Color coded scale — extra clear and "needle" sharp of easy reading.

Meter — Size: 2½" x 2½"
Scale — Color Coded — Good — Bad
Ignition Output — Green — Red
0-10 Graduation for comparison only
Meter Sensitivity: .2 M Amp.
Leads: 48" long
Clips: Red (pos) Black (neg)
Meter Accuracy ± 2% Shpg. Wt. 1.91 lbs.
"How to Use" booklet included free.

PROTO
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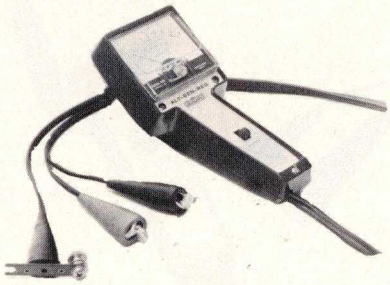


AGR-25 "Model B" ALT.-GEN.-REG.

Alternator, Generator and Regulator Tester is a compact, durable, easy-to-use instrument for checking and adjusting voltage and amperes on 6 and 12 volt charging systems with generator or alternator—and regulators with single or double contacts.

Meter Range	Dual Range Increments	Size: 2½" x 2½" Color
-10-0-80 amps	1 amp	Red
0-16 volts	.5 volts	Black

Meter Sensitivity: 1 M.A.
Control: 1 selector switch
Leads (2) 48" long
1 Set: Red (pos) Black (neg)
1 Set: Amp w/external shunt
Meter Accuracy ± 2% Shpg. Wt. 1.91 lbs.
Accessories:
1 Jumper Wire: 14"
1 Resistor Unit: ¼ Ohm.
"How to Use" booklet included free.

DT-40 DWELL TACHOMETER

May be used on stand or held in hand. Equipped with attachable handle. Fully transistorized. 6 and 12 volt systems. Checks 4, 6 and 8 cylinder engines, conventional or transistorized ignition systems. Use in shop or on service call to set and adjust carburetor, dwell, dwell variation, RPM and check point resistance.

Meter Scale	Multi-Range Range	Size: 4½" x 4" Increments	Color
Lo RPM	0-1000 RPM	20 RPM	Black
Hi RPM	0-5000 RPM	100 RPM	Black
Dwell	0-60 Degrees	1 Degree	Red

Points Resistance (Marking) OK ZONE
8, 6 and 4 cyl. eng. (for 4 cyl., double 8 cyl. reading)
Meter Sensitivity: .2 M Amps
Control: 1 Selector Switch
1 Set Knob
Leads: Extra Long 84"
Clips: Red (pos) Black (neg)
Powered By: 2 size "C" flashlight bat.
Meter Accuracy ± 2% Shpg. Wt. 3.45 lbs.

IGN-40 IGNITION TESTER

Assures the correct amount of spark at the spark plug. Also checks secondary current, ignition reserve and ignition output; coil and wire, spark plugs and wires, distributor cap and rotor; coil polarity and points resistance.

Meter Scale	Multi-Ranges Color Coded	Size: 4½" x 4" Good	Bad
Secondary Current		Green	Red
Ignition Reserve		Green	Red
Ignition Output		Green	Red
Points Resistance (marking)		OK ZONE	
0-10	Graduation for comparison only.		

Meter Sensitivity: .2 M Amp.
Control: 1 Selector Switch
Leads: Extra Long 84"
Clips: Red (pos) Black (neg)
Shipping Weight 3.45 lbs.

AGR-40 ALT.-GEN.-REG.

"Hand-held" or "stand-held" Alternator, Generator and Regulator Tester. It is designed to make all electrical tests and adjustments on 6, 12 and 24 volt systems.

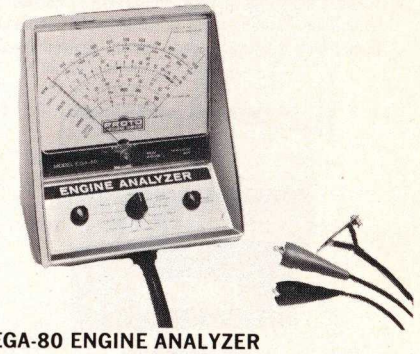
Meter Scales	Multi-Range Ranges	Size: 4½" x 4" Increments	Color
Volt	0-3.2 Volts	.1 Volts	Black
Volt	0-32 Volts	.5 Volts	Black
Volt	0-16 Volts	.1 Volts	Black
Amp.	-10-0-90 Amp.	1 Amp	Red

Meter Sensitivity: 1 M.A.
Control: 1 Selector Switch
Leads (2): Extra-long 84"
1 Set Red (pos) Black (neg)
1 Set Amp. w/extnl. Shunt
Meter Accuracy ± 2% Shpg. Wt. 3.45 lbs.
Accessories
1 Jumper Wire: 14" long
1 Resistor Unit: ¼ Ohm.

EXA-40 EXHAUST ANALYZER

Specially engineered for testing the entire carburetion system, and air fuel ratio. Color-coded scale eliminates conversion charts. You read direct. Scale shows whether combustion mixture is rich or lean. Pick-up hose unit attaches to tailpipe for readings.

Meter Accuracy 2% Size: 4½" x 4"
Scale Air/Fuel Ratio
Gasoline 11/1 to 16/1
Lp Gas 11/1 to 16/1
Carbon monoxide (CO%) 0% to 10%
Marking Lean - Rich
Power 6 or 12 volt car bat. or D.C.
Control: 1 balance knob
1 circuit check-push button
Battery Leads: Extra long 84"
Clips: Red (pos) Black (neg)
"How to Use" booklet included free.
Instruction plate on back of unit.
Shipping Wt. 6.90 lbs.



EGA-80 ENGINE ANALYZER

One multi-scale meter does the work of four separate combination instruments—with only two sets of leads. With this very versatile unit, it is possible to check nearly every electrical unit on a vehicle from headlight to taillight.

Meter Scale	Multi-Range Range	Sizes: 8" x 6½" Increments	Color
Lo RPM	0-1000 RPM	10 RPM	Black
Hi RPM	0-5000 RPM	100 RPM	Red
Dwell*	0-60 Degrees	1 Degree	Red
Volt	0-16 Volt	.1 Volt	Black
Volt	0-3 Volt	.1 Volt	Black
Amp.	-10-0-90 Amp.	1 Amp	Red
Ohm.	40 Thousand Ohms		Black
Sp'rk O'put	0-30 Ref.	1	Red

*8, 6, 4 cyl. Eng.
(For 4 cyl., double 8 cyl. reading)
Meter Sensitivity: .2 M Amp.
Control: Selector Switch/Set Knob or Ohm. Set Knob/Dwell & Tach.
Leads (2): Extra long 84"
Clips: 1 set Red (pos) Blk (neg); 1 set Amp. w/External Shunt
Powered by: 2 size "C" Flashlight bat.
Meter Accuracy ± 2% Shpg. Wt. 5.20 lbs.
Accessories
Jumper Wire: 14"/Resistor Unit: ¼ Ohm.

PROTO
PROFESSIONAL TOOLS

DT-80 DWELL TACHOMETER

An 8″ shock-proof precision meter. Large meter scale assures extreme accuracy. Combination dwell meter, tachometer and points resistance tester. Designed to service and adjust all 6 and 12 volt systems; 4, 6 and 8 cylinder engines.

Meter Scale	Multi-Range Range	Size: 8″ x 6½″ Increments	Color
Lo RPM	0-1000 RPM	20 RPM	Black
Hi RPM	0-5000 RPM	100 PM	Black
Dwell	0-60 Degrees	1 Degree	Red

Points Resistance ((Marking)
8, 6 and 4 cyl. eng.
(for 4 cyl., double 8 cyl. reading)
Meter Sensitivity: .2 M Amp.
Control: 1 Selector Switch
1 Set Knob
Leads: Extra long 84″
Clips: Red (pos) Black (neg)
Powered by: 2 size "C" flashlight bat.
Meter Accuracy ± 2% Shpg. Wt. 5.20 lbs.
"How to Use" booklet included free.

AGR-80 ALTERNATOR-GENERATOR-REGULATOR

Designed for quick, accurate and complete testing and adjusting of units in 6, 12 and 24 volt electrical systems.

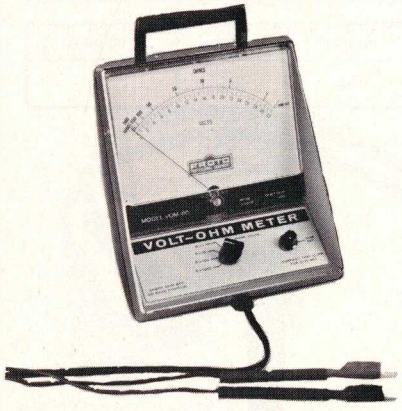
Meter Scale	Multi-Range Range	Size: 8″ x 6½″ Increments	Color
Volt	0-3 Volts	.1 Volts	Black
Volt	0-32 Volts	.2 Volts	Black
Volt	0-16 Volts	.1 Volts	Red
Amp.	-10-0-90 Amp.	1 Amp.	Red

Meter Sensitivity: 1 M.A.
Control: 1 Selector Switch
Leads (2): Extra-long 84″
1 Set Volts
Red (pos) Blk (neg)
1 set Amps w/Extnl. Shunt
Accessories
1 Jumper Wire: 14″ long
1 Resistor Unit: ¼ Ohm
Shipping Wt. 5.20 lbs.
"How to Use" booklet included free.

EXA-80 EXHAUST ANALYZER

Two unit system for testing the entire carburetion system, air fuel ratio. 8″ color coded scale eliminates conversion charts. Scale shows whether combustion mixture is rich or lean. Cell unit attached directly to tailpipe transmits reading instantly.

Meter accuracy 2%
Meter size 8″ x 6½″
Scale Air/Fuel Ratio
Gasoline 11/1 to 16/1
LP Gas 11/1 to 16/1
Carbon Monoxide (CO%) 0% to 10%
Marking (CO%) Lean - Rich
Powered by 6 or 12 volt car battery or D.C. battery supply.
Control: 1 balance knob
1 circuit check-push button
Lead for Exhaust pickup unit 24′ long
Battery Leads: Extra long 84″
Clips: Red (pos) Black (neg)
Shipping Wt. 7.87 lbs.
Accessories: (1)1′ pipe, (1) 36″ hose.



VOM-80 VOLT-OHM METER

Tests all ohmic values. Trouble-shoots primary/secondary wires and other electrical components for continuity and resistance. Dial has multi-range ohmmeter and single range voltmeter.

Meter accuracy 2%
Meter size 8″ x 6½″

Scale	Range	Increments	Color
Volt	0-32 Volts	½ Volt	Red
OHMS R x 1	0-1,000 OHMS		Blk.
OHMS R x 10	0-10,000 OHMS		Blk.
OHMS R x 100	0-100,000 OHMS		Blk.
OHMS R x 1000	0-1,000,000 OHMS		Blk.

Control 1 Selector Switch
Leads Extra Long 84″
Probes Red (pos) Black (neg)
Probe Clips Removable—Screw-on type
Powered by 2 size "C" batteries
Shipping Wt. 5.25 lbs.

ADT-10 ALTERNATOR DIODE TESTER

Checks diodes, transistors and polarity. Tests can be made quickly and easily without taking time to look up specifications.

Meter accuracy 2%
Meter size 2½″ x 2½″
Scale—Color coded Red Green Red
Alternator diode Open—OK—Short
Transistor Open—OK—Short
0-100 Graduation for Comparison only
Polarity Positive Neg.
Lead, Power-115 Volt 42″ long
60 Cycle AC
Lead, Test 36″ long
Clip Black
Probe Red
Shpg. Wt. 2.1 lbs.

PTL-10 DC POWER TIMING LIGHT

Operates on 6 or 12 volt systems and automatically selects the correct voltages and polarity. Blue-white flash makes it easy to read the timing mark. Can be used on any combustion engine and impulse ignition, magneto ignition.

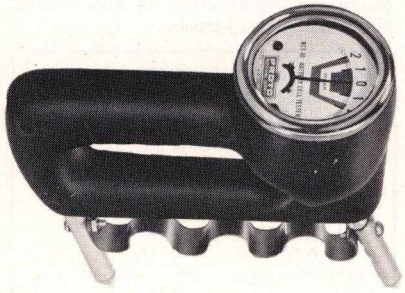
ACP-10 AC POWER TIMING LIGHT

Utilizes 115 volts, AC, as basic power source. Operates on 6, 12, 24 and 32 volt systems, as well as magneto or battery ignition equipped small engines. A brilliant blue-white flash, for identifying the timing mark.

PROTO PROFESSIONAL TOOLS

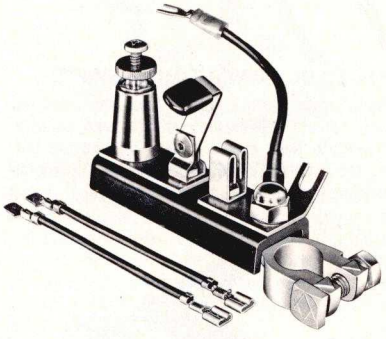
NTL-10 NEON TIMING LIGHT

Designed for quick, accurate testing and setting the ignition timing. A timing light synchronizes light and motion so that the timing marks on the vehicle appear stationary. Assists operator in timing the ignition distributor to the engine.



BCT-10 BATTERY CELL TESTER

Checks cells in 6, 12 and 24 volt systems. It is streamlined for "one hand" use and engineered for making individual load tests, one cell at a time, in or out of vehicle. Adjustable prods fit all battery cells. Flexible shunt, between prods, places load on the battery during test. Large 2" meter has a color coded scale for easy reading and is calibrated from 2.8-0-2.8 volts in .2 volt increments.



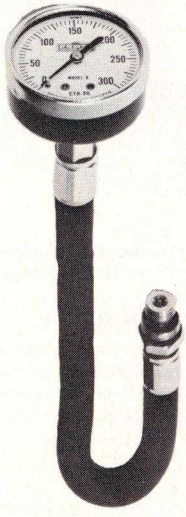
BPA-10 BATTERY POST ADAPTER

Battery Post Adapter with Alternator Jumper Leads allows mechanic to insert Amp Meter in series with the charging system and attach Volt Meter to make all checks of charging system on vehicle equipped with popular make of alternator. Opening and closing of knife switch makes checking of alternators simple, fast and foolproof. Shipping Wt. 2 lbs. Packed 1 per box.

CTR-10 COMPRESSION GAUGE

Equipped with a "quick-disconnect" coupler for extra ease and speed in handling. Run hose and fitting in the spark plug hole "finger-tight" and snap on the gauge which has convenient side release valve. Includes adapter for regular 14mm and 18mm spark plugs, plus special adapter for 14mm long spark plugs.

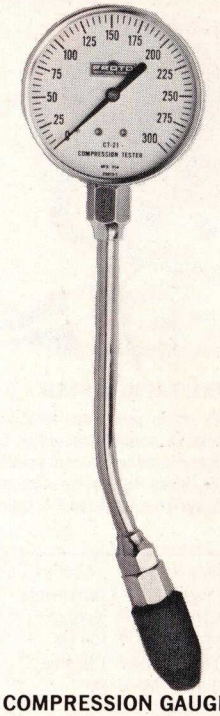
Height	Width	Shipping Wt.
5½	2½	1.2 lbs.



CTR-20 COMPRESSION GAUGE

Flexible hose makes it possible to check any engine regardless of spark plug location. Includes an adapter which fits 14mm long reach, 14mm and 18mm regular. Equipped with neoprene O-rings for finger-tight, positive seal and convenient side release valve.

Height	Width	Shipping Wt.
2	2	1.2 lbs.



CT-21 COMPRESSION GAUGE

Features 0-300 pound capacity gauge for easy reading. Comes with extension and an adapter with rubber cone. Use it to test compression and check valves, piston rings, and head gasket.

Height	Width	Shipping Wt.
9	2½	1.2 lbs.

CTR-10M COMPRESSION GAUGE

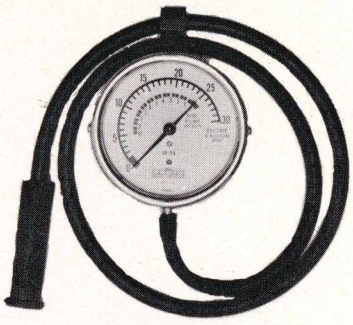
For making compression checks on engines where millimeter values are used in manufacturers specs. A "quick-disconnect" coupler lets you screw adapter with hose into spark plug hole "finger tight," snap on gauge – make tests. Has pressure release valve, an adapter to fit 14mm and 18mm size spark plug holes, plus a special long 14mm adapter.

CTR-20-M
COMPRESSION GAUGE

Has dual reading scales, metric and psi. Flexible hose for any spark plug location. 14mm and 18mm engines can be tested with the one dual universal adapter. "Finger tight" positive "O" ring seals and side release valve.

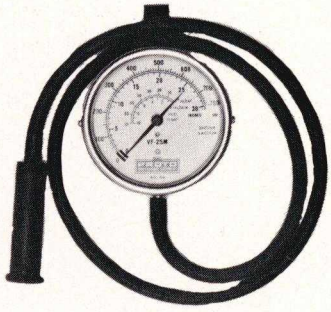
CT 21-M
COMPRESSION GAUGE

Works on all engines. Easy to read 0-20 KG/CM² and 0-300 lb. meter has wide application. Long extension for hard to reach places. Includes adapter and rubber cone. Test compression for leaking valves, piston rings, or head gaskets.



VF-25 VACUUM GAUGE

A combination tester designed for over-all testing to show engine performance and fuel pump pressure under operation conditions. Shipping Wt. 1.60 lbs.



VF-25M
VACUUM GAUGE

A combination vacuum and fuel pump pressure gauge for overall testing and reading of metric and American systems. Read metric or American scales directly. Shows actual engine performance under operating conditions.

*For 4 cyl. engine, double the 8 cyl. reading. Meter Accuracy: ± 2%

RS-26 REMOTE STARTER SWITCH

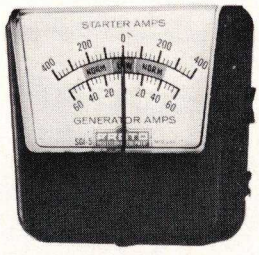
Designed for cranking all solenoid equipped engines from under-the-hood. Handy when adjusting ponits, valves and compression testing. 60" leads. Shipping Wt. 60 lb.

RSI-30 REMOTE START AND STOP SWITCH

A remote start and stop switch for complete control of cranking, starting, and stopping of all solenoid equipped engines with one hand. Used to adjust points, valves, check compression. 122" leads. Shipping Wt. .80 lbs.

CP-100 CARBON PILE UNIT

Designed for use with AGR-40 and AGR-80 Alternator-Generator-Regulator Tester and EGA-80 Engine Analyzer to electrically load the charging circuit during tests. It consists of a spring loaded carbon pile rheostat of 0-100 ampere capacity. Shipping Wt. 3.10 lbs.



SGI-5 STARTER GENERATOR CURRENT TESTER

This is a hand-held combination two-in-one starter and generator current indicator. It incorporates two scales for quick reading of both starter current draw and generator charging.

WARRANTY

ALL PROTO PROFESSIONAL EQUIPMENT IS GUARANTEED AGAINST ANY DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM DATE OF PURCHASE. THIS WARRANTY DOES NOT COVER ANY INSTRUMENT THAT HAS BEEN ABUSED OR DAMAGED BY IMPROPER USE AND OR APPLICATION OR ACCIDENTAL DAMAGE. NO INSTRUMENT THAT HAS BEEN BROKEN OR CRUSHED; OR HAS A DAMAGED CASE OR METER FACE WILL BE REPAIRED UNDER THIS WARRANTY. BROKEN TUBES IN TIMING LIGHTS ARE NOT COVERED UNDER THIS WARRANTY. BATTERIES ARE NOT WARRANTED.

NOTES

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